2

Skull Hunters on the Pampa

Anthropology as Uncanny Encounter in Argentina's "Last Massacre"

JULIA E. RODRIGUEZ

Rudolf Virchow, the pioneering German pathologist and one of the Atlantic world's most renowned scientific figures in the late nineteenth century, was excited. It was 1879, and his colleague, Carl Hagenbeck, had traveled from South America with three visitors – a man, woman, and child named Pikjiojie, Batzinka, and Luis. The three hailed from the southernmost tip of Chile, a territory also claimed by Argentina. They were Indigenous people from Patagonia, on display for the German scientific audience. Virchow presented his expert assessment of their cranial types, facial measurements, and body features. He recorded his remarks and published them in the top anthropology journal of his day.[1]

Anthropometry was but one of Virchow's scientific interests. He was one of the most famous scientists in late nineteenth-century Europe, a brilliant doctor with a broad range of influence, best known for his pioneering work in cell pathology. Virchow had by then also become a major political figure in German liberal reform movements.

Meanwhile, just north of Punta Arenas, Argentina, the young Argentine naturalist Francisco Pascasio Moreno was getting ready for his third major expedition in Patagonia. Moreno, a top scientist in Argentina and member of a powerful family dynasty, published lengthy accounts of his trips, including descriptions of interactions with local Indigenous peoples. On these journeys, Moreno filled multiple roles: geographer, diplomat, adventurer, and scientist. But his main goal was to gather specimens – including human remains – for his growing collection, destined to be housed in Argentina's first Natural History Museum.[2] The most valuable bounty was the skulls and skeletons he

[1] Rudolf Virchow, "Drei Patagonier," *Zeitschrift für Ethnologie* XI (1879): 198–204. Hagenbeck was an animal importer who also trafficked in humans for zoos and living exhibits; see Pascal Blanchard et al., eds., *Human Zoos: Science and Spectacle in the Age of Empire* (Liverpool: University of Liverpool Press, 2008). Unless noted otherwise, all translations from Spanish, French, and German are my own.

[2] On the history of the Museo de La Plata, see Máximo Farro, *La formación del Museo de la Plata: Coleccionistas, comerciantes, estudiosos y naturalistas viajeros a fines del siglo XIX*

Downloaded from https://www.cambridge.org/core. IP address: 18.118.208.173, on 26 Jan 2025 at 21:51:57, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009398152.005

came across on his journeys. Some were from recently deceased Aònikenk (Tehuelche) and Genniken people; others he hoped were remnants of ancient "Man."[3]

Moreno and Virchow never met in person, yet their work in physical anthropology was intertwined. The intellectual and professional context of their work with human skulls was Americanism, an interdisciplinary scientific project that emerged in near-parallel with anthropology in the late nineteenth century. Initially born in the 1860s of the efforts of naturalists, linguists, and archaeologists primarily from France, Germany, and Britain, within a few decades the movement expanded from a handful of national institutions such as museums and scientific groups to a transnational network of scientists. In 1875, men (and a few women) from scientific backgrounds ranging from medicine to classics joined together to establish a more broad-based group specifically focused on the prehistory, culture, and racial traits of New World populations. Both Moreno and Virchow participated in the meetings of this group, the International Congress of Americanists (ICA). They also crossed paths in other ways, such as exchanging material and correspondence.

Americanist anthropologists dipped into novel scientific methodologies, including the physical analysis of human bodies, or forensics. Anthropology – the "science of man" – itself emerged from a medicalized and body-based approach to human difference, and its practitioners, many of whom were trained in medicine, applied new techniques from biology and anthropometry to their study of cultures and civilizations, human origins, and heritage. These endeavors garnered new levels of state support from nations in Europe and the Americas, as governments funded scientific expeditions as part of larger colonial or postcolonial stratagems.

The emergence of scientific anthropology coincided with the opening of new areas for exploration in the Americas and a corresponding tidal wave of material evidence. Sites in postcolonial Latin America, finally stable after

(Rosario, Argentina: Prohistoria Rosario, 2009); Jens Andermann, *The Optic of the State: Visuality and Power in Argentina and Brazil* (Pittsburgh: University of Pittsburgh Press, 2007); Carolyne R. Larson, *Our Indigenous Ancestors: A Cultural History of Museums, Science, and Identity in Argentina, 1877–1943* (University Park: Penn State University Press, 2015); and I. Podgorny and M. Lopes, *El desierto en una vitrina: museos e historia natural en la Argentina* (Mexico City: UNAM, 2008). On the international circulation of Argentine objects, see Ashley Kerr, "From Savagery to Sovereignty: Identity, Politics, and International Expositions of Argentine Anthropology (1878–1892)," *Isis* 108, no. 1 (March 2017): 62–81.

[3] Another dimension to consider is the role that Patagonian artifacts played in the history of origins theory; see Irina Podgorny, "Bones and Devices in the Constitution of Paleontology in Argentina at the End of the Nineteenth Century," *Science in Context* 18, no. 2 (2005): 249–283; Irina Podgorny, "Human Origins in the New World? Florentino Ameghino and the Emergence of Prehistoric Archaeology in the Americas, 1875–1912," *Paleoamerica* 1, no. 1 (2016): 68–80.

Downloaded from https://www.cambridge.org/core. IP address: 18.118.208.173, on 26 Jan 2025 at 21:51:57, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009398152.005

decades of civil war, emerged as promising new sources of scientific material. Argentina, lacking the architecture of Aztec and Maya civilizations, nonetheless constituted a promising site for paleontologists and physical anthropologists. As early as the 1840s, British, French, and Spanish scientific explorers took to the systematic exhumation and analysis of animal fossils in Argentina, and nowhere more than in Patagonia, which remains a major site of fossil finds to this day.[4] Americanists practiced what we now call "salvage" anthropology – the imperative to preserve and record human and cultural products just as they were "disappearing" – as a key component of settler colonialism.

Recognizing cultural production as an ingredient to understanding settler colonialism as "a structure, not an event" extends to the reconstruction of human emotions, or in Ann Laura Stoler's words, the "*distribution of sentiments* within and between empire's subjects and citizens as part of imperial statecraft."[5] Indeed, historians have turned to the psychodynamic experiences that scientists and their subjects navigated in the context of inherited power dynamics, recognizing affective relations as important and revealing facets of colonial and postcolonial encounters.[6] In any such moment, a range of behaviors is possible; there can be subtle nuances in even the most brutal situations. On the individual level, each scientist who ventured into a foreign zone – just as each person who found themself confronted by an invader –

[4] Irina Podgorny, "De ángeles, gigantes y megaterios. El intercambio de fósiles de las provincias del Plata en la primera mitad del siglo XIX," in Salvatore, ed., *Los lugares del saber. Contextos locales y redes transnacionales en la formación del conocimiento modern* (Buenos Aires: Beatriz Viterbo, 2007), 125–157. On scientific expeditions to Argentina, see also Adriana Novoa and Alex Levine, *From Man to Ape: Darwinism in Argentina* (Chicago: University of Chicago Press, 2010), chapter 1.

[5] Ann Laura Stoler, "Intimidations of Empire: Predicaments of the Tactile and Unseen," in *Haunted by Empire: Geographies of Intimacy in North American History*, ed. Ann Laura Stoler (Durham, NC: Duke University Press, 2010), 4, emphasis in original; for more on the "affects" of empire and refusal primarily in the North American context, see essays in Stoler, *Haunted by Empire*; and Carole McGranahan and John F. Collins, eds., *Ethnographies of U.S. Empire* (Durham, NC: Duke University Press, 2018). See also Mark Rifkin, *Settler Common Sense* (Minneapolis: University of Minnesota Press, 2014); J. Kēhaulani Kauanui, "'A Structure, Not an Event': Settler Colonialism and Enduring Indigeneity," *Lateral* 5, no. 1 (2016), https://csalateral.org/issue/5-1/forum-alt-humanities-settler-colonialism-enduring-indigeneity-kauanui/.

[6] In Warwick Anderson, Deborah Jenson, and Richard C. Keller, eds., *Unconscious Dominions: Psychoanalysis, Colonial Trauma, and Global Sovereignties* (Durham, NC: Duke University Press, 2011), the authors highlight the "globalization of the unconscious as a mediating discourse of modern civilization, its discontents, and its others." (1) See also Christopher Heaney, "A Peru of Their Own: English Grave Opening and Indian Sovereignty in Early America," *William and Mary Quarterly* 73, no. 4 (October 2016): 609–646; and Fenneke Sysling, "Racial Science and Colonial Practice in the Netherlands East Indies, ca. 1890–1960," unpublished paper presented at "Phrenologies" workshop, Clarkson University, August 2015.

Downloaded from https://www.cambridge.org/core. IP address: 18.118.208.173, on 26 Jan 2025 at 21:51:57, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009398152.005

experienced some form of psychological drama.[7] We can characterize many of these moments as triggering the Freudian Uncanny, that is, something or someone who is strangely familiar, always disconcerting. The feeling of unease could result in a specter-like image of Indigenous peoples, simultaneously seen as alive and dead, passive and active, weak and dangerous.[8]

The two men shared a passion for scientific discovery; in particular, they sought answers for large and pressing questions about human evolution and racial classification.[9] Comparing Moreno and Virchow's experiences with Indigenous Argentine individuals expands our understanding of the emotive aspects of relationality; the impact of historical context on these affective relations, in particular the varieties of colonial and postcolonial science in settler societies; the construction of material and spiritual meaning in early anthropology; and like other works in this book, encourages us to consider the boundaries – and the limits – of the moral field concept. Finally, insofar as the behavior and emotional responses of Indigenous individuals were noted, the encounters revisited here provoke us to reflect on the concepts of reciprocity and relationality in moments of contact in the human sciences.

The intertwined stories of the two skull scientists discussed here illustrate, however, that despite significant variations in their affective relations with their subjects, similar psychological and professional goals overruled their humanism. In instances of skull science with Indigenous bodies in South America, our attention to affect, intention, and agency highlights the joint significance of material context and power dynamics on the one hand, and personal experiences of actors on the other.[10] Whether colonialism is driven by external or internal forces, both are harmful, albeit in different ways. In this sense, a comparative view of the dynamics between anthropologist and human

[7] Stephen Greenblatt has described the first emotion at the moment of encounter as that of wonder; almost at the speed of light, the individual must decide what to do with that emotion. He or she has a choice: constructively engage the Other or annihilate it. Stephen Greenblatt, *Marvelous Possessions: The Wonder of the New World* (Chicago: University of Chicago Press, 1991).

[8] Renee Bergland observes a "literary Indian removal" that includes the "ghosting" of Indians as a "technique of removal"; Renee Bergland, *The National Uncanny: Indian Ghosts and American Subjects* (Dartmouth, NH: University Press of New England, 2000), 3–4. See also Jesse Alemán, "The Other Country, Mexico, the United States, and the Gothic History of Conquest," in *The Spectralities Reader: Ghosts and Haunting in Contemporary Cultural Theory*, eds. María Pilar del Blanco and Esther Peereen (London: Bloomsbury, 2013), 507–526.

[9] See Robert E. Bieder, *Science Encounters the Indian, 1820–1880* (Norman: University of Oklahoma Press, 1986); L. Stephen Jacyna, "Medicine in Transformation, 1800–1849," in *The Western Medical Tradition, 1800–2000*, eds. W. F. Bynum et al. (New York: Cambridge University Press, 2006), 92–99.

[10] Ruth Leys, "The Turn to Affect: A Critique," *Critical Inquiry* 37, no. 3 (2011): 434–472.

Downloaded from https://www.cambridge.org/core. IP address: 18.118.208.173, on 26 Jan 2025 at 21:51:57, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009398152.005

subjects allows us to trace key and intersecting aspects of the material and psychological dimensions of colonial violence and their implications for the construction of ethical norms for encounters in the human sciences.

Skulls as Uncanny Objects

That prominent scientists like Moreno and Virchow accelerated the collection, analysis, and display of human skulls reflected a growing interest in, if not an obsession with, human parts as the centerpiece of Americanist investigation in the late nineteenth century.[11] Anthropological expeditions and displays of artifacts in museums in all major cities on both sides of the Atlantic reflected the growing fetishization of human body measurement as the centerpiece of Americanist investigation. Craniology began in the 1830s, established by figures such as US scientist Samuel George Morton, who assembled a vast collection of human skulls and used them not just to provide evidence for polygenic theories of human biological descent, but also to justify superiority of the Nordic race.[12] While Morton had his detractors (such as Rudolf Virchow, who believed in the unity of humankind), the fascination with crania cut across all sides of the evolutionary debate.

While later generations would thoroughly debunk craniology's scientific and moral failures as well as anthropology's symbiosis with colonial regimes, late nineteenth-century anthropologists saw skulls at the centerpiece of their field's most pressing questions. Even when handled in volume, skulls are not just any type of scientific evidence.[13] Cara Krmpotich and coauthors remind us that bones are not mere lumps of matter but are "constantly constituted and negotiated as persons or things, subjects or objects, meanings or matter … The materiality [of bones] engages those they encounter."[14] They draw our

[11] Benoit Massin, "From Virchow to Fischer: Physical Anthropology and 'Modern Race Theories' in Wilhelmine Germany," in *History of Anthropology: Volksgeist as Method and Ethic*, ed. George Stocking (Madison: University of Wisconsin Press, 1998), 79–154, 83. On bone collecting in US museums, see Samuel J. Redman, *Bone Rooms: From Scientific Racism to Human Prehistory in Museums* (Chicago: University of Chicago Press, 2010).

[12] Ann Fabian, *The Skull Collectors: Race, Science, and America's Unburied Dead* (Cambridge, MA: Harvard University Press, 2016).

[13] The dead "do things the living could not do on their own." See Thomas W. Laqueur, *The Work of the Dead: A Cultural History of Mortal Remains* (Princeton: Princeton University Press, 2015), 18.

[14] Krmpotich et al. go so far as to say the bones themselves have agency, flipping the direction of the typical question to "what do bones do to people?" Cara Krmpotich, Joost Fontein, and John Harries, "The Substance of Bones: The Emotive Materiality and Affective Presence of Human Remains," *Journal of Material Culture* 15 (2010): 371–384 at 372–373, 381. For an illustration of this approach, see Kim Wagner, "Confessions of a Skull: Phrenology and Colonial Knowledge in Early Nineteenth-Century India," *History Workshop Journal* 69, no. 1 (March 2010): 27–51.

Downloaded from https://www.cambridge.org/core. IP address: 18.118.208.173, on 26 Jan 2025 at 21:51:57, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009398152.005

attention to bones as "uneasy, ambivalent subject/objects" with the ability to "make present that which is absent."[15] Bones can remind the living of the deceased, creating a haunting effect as scientists imagine who lived in those bones, speculating about the deceased's spirit, soul, or personality. By the same token, the materiality of human bones, their hard substance lasting longer than flesh, is a reminder of past historical events.[16] This uniquely spiritual materiality of human remains impacts our understanding of the person's place in past events. In the context of skull science in Argentina, the materiality of human remains expands the historian of science's toolkit.

Moreno and Virchow, embedded as they were in a larger network of Americanist anthropology, placed human skulls at the center of their scientific work. To that end, they both repeatedly engaged with their main sources: dead and living Indigenous bodies. While both scientists directly engaged with Indigenous individuals, one had extensive, close, even life-long contact with his human subjects, and the other was removed from the field. So while there are important differences in the dynamics of these encounters, in the end both were active participants in violent acts of Indigenous erasures, enhanced as they were by their own ambivalence. In this sense, the story of skulls on the Pampa fits Amy Lonetree's framing of history, which calls us to pay attention to both agency and harm, trauma and resistance. "Hard truths" are recognized just as productive refusal and other forms of Indigenous agency and desire emerge in the narrative.[17] Moreover, the story reveals how personal dynamics between people created multiple, and sometimes unpredictable, outcomes.

The quest for Indigenous peoples' skulls on the fertile plains of the Argentine Pampa after 1870 was set in motion by a tangle of scientific, economic, and military agendas. The episode implicated actors from local Indigenous people to wealthy elites in Buenos Aires, to intellectuals in North Atlantic capitals. The two scientists seeking skulls in a contested territory were of course shaped by their specific contexts, including differences in Argentine and German political, intellectual, and institutional milieus. For example, Moreno worked for an expansionist Argentine state that had specific goals and assumptions about comparative human worth framing its mission.[18] Argentina sits uneasily between models of Northern/British settler colonialism and Latin American internal colonialism. A crowded urban center with a

[15] Krmpotich et al., "The Substance of Bones," 372, 378. For broader discussion of the ambiguities of human remains, see Karin Sanders, *Bodies in the Bog and the Archaeological Imagination* (Chicago: University of Chicago Press, 2009).

[16] Krmpotich et al., "The Substance of Bones," 375.

[17] Lonetree, *Decolonizing Museums*.

[18] For a recent intersectional analysis of the frontier sciences in Argentina, along with a discussion of sexuality and desire in scientific excursions, see Ashley Elizabeth Kerr, *Sex, Skulls, and Citizens: Gender and Racial Science in Argentina (1860–1910)* (Nashville, TN: Vanderbilt University Press, 2020).

Downloaded from https://www.cambridge.org/core. IP address: 18.118.208.173, on 26 Jan 2025 at 21:51:57, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009398152.005

European-descended majority, a relatively low-density population with large "unconquered" tracts until the 1890s, and a late-stage scramble for land were the factors that led to Argentina's distinct hybrid postcolonial relations. Moreno's participation in salvage anthropology must be viewed in this unique context.[19]

Virchow, on the other hand, was shaped by German liberal cosmopolitanism, a philosophy that would later inspire radical egalitarianism in some of his students, most famously Franz Boas. Virchow, a German scientist of great stature, was a political progressive who "saw no contradiction between [his elite status]" and his liberal views.[20] A close reading of his and Moreno's own words about their observations and interactions with Indigenous Americans, along with a reading between the lines to extrapolate the experiences of their human subjects, reveals intricate and layered encounters – occurrences that had real consequences for European science, Argentine national goals, and Indigenous peoples' lives.[21] Their interactions with skulls demonstrate how body parts, especially crania, are key to understanding historical acts of dehumanization, including colonial scientific encounters and state campaigns to physically and culturally annihilate Indigenous peoples in postcolonial settler societies, even as they reveal elements of ambiguity.

The scientific encounter between anthropologist and subject, then, can highlight some of the nuances of what we have come to call colonial science, and the difficulty of navigating damage narratives. The scientists, for their

[19] See Fernanda Peñaloza, "On Skulls, Orgies, Virgins and the Making of Patagonia as a National Territory: Francisco Pascasio Moreno's Representation of Indigenous Tribes," *The Bulletin of Hispanic Studies* 87, no. 4 (2010): 455–472; Ricardo D. Salvatore, "Live Indians in the Museum: Connecting Evolutionary Anthropology with the Conquest of the Desert," in *The Conquest of the Desert: Argentina's Indigenous Peoples and the Battle for History*, ed. Carolyne Larson (Albuquerque: University of New Mexico Press, 2020), 97–121.

[20] Jacyna L. Stephen, "Medicine in Transformation, 1800–1849," in *The Western Medical Tradition, 1800–2000*, eds. W. F. Bynum et al. (New York: Cambridge University Press), 100. For a darker historical perspective on German anthropology, see Andrew Zimmerman, *Anthropology and Antihumanism in Imperial Germany* (Chicago: University of Chicago Press, 2001). See also Stocking, *Victorian Anthropology*.

[21] See Kerr, *Sex, Skulls, and Citizens*; also William Y. Adams, *The Boasians: Founding Fathers and Mothers of American Anthropology* (New York: Hamilton Books, 2016); H. Glenn Penny, "The Politics of Anthropology in the Age of Empire: German Anthropologists, Brazilian Indians, and the Case of Alberto Vojtech Frič," *Comparative Studies in Society and History* 45, no. 2 (April 2003): 249–280; see also Warwick Anderson, *The Collectors of Lost Souls: Turning Kuru Scientists into Whitemen* (Baltimore: Johns Hopkins University Press, 2019) on interpersonal exchange between anthropologists and subjects. For an explanation of another dimension of German cultural activity in Latin America, see H. Glenn Penny, "Material Connections: German Schools, Things, and Soft Power in Argentina and Chile from the 1880s through the Interwar Period," *Comparative Studies in Society and History* 59, no. 3 (July 2017): 519–549.

Downloaded from https://www.cambridge.org/core. IP address: 18.118.208.173, on 26 Jan 2025 at 21:51:57, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009398152.005

part, performed ambivalence about the human relations they initiated. Indigenous perspectives are legible in these encounters in terms of acts of both reciprocity and refusal. Affective reflections revealed that all parties existed in uneasy tension with each other, characterized by occasional reciprocity and more frequently, heartbreaking acts of annihilation. Not surprisingly, individuals like Moreno and Virchow did not regard themselves as abusive monsters; quite the contrary. They believed they were humanistic champions of progress, imbued with genuine affection for Indigenous people. Philosopher of dehumanization David Livingstone Smith has pointed out that the mere fact of considering the Other as less than human provides a rationalization for violence, but not in a straightforward way: "Dehumanizers often *behave* towards their victims in a manner that implicitly acknowledges their humanity… In dehumanizing others, we categorize them *simultaneously* as human and subhuman."[22] In colonial and postcolonial settings, uncanny emotions arise when we recognize our savage past in the Other, a concept of direct relevance to anthropologists.[23]

As these actors ran up against each other on the Argentine Pampa, the skull scientists left a record not just of their findings, but also their personal and emotive reactions to the skulls. At the same time, they noted to varying degrees the reactions, behavior, and emotional states of the Indigenous people they engaged. Moreno and Virchow's overlapping but distinct encounters examined here dramatically reveal the contours of the uncanny encounter between liberal anthropologist and subject. The affective dimensions of their skull work seamlessly merged with the material realities of frontier violence and the scramble for objects of economic and scientific value. These two scientists, with their close contact with Indigenous people, provide unusually direct examples of these intimate exchanges. How did Aònikenk and other Indigenous peoples' active roles in the process contribute to the emotive and intellectual dynamics of encounters? Were Moreno and Virchow swayed by

[22] David Livingstone Smith, "Paradoxes of Dehumanization," *Social Theory and Practice* 42, no. 2 (April 2016): 417–418. Emphasis in original. The uncanny, or a destabilizing feeling of strange familiarity, derives from Sigmund Freud's concept of *Unheimlich*. Freud argued it is necessary to repress uncanny emotions to create a civilized society (although we usually fail).

[23] Priscilla Wald saw this dynamic in nativism against immigrants in the nineteenth-century United States, observing that "anxiety [or estrangement] … grows out of the transmutation of something 'known of old and long familiar' into something frightening … [One] recognizes the stranger, whose appearance he dislikes, as himself." Priscilla Wald, *Constituting Americans: Cultural Anxiety and Narrative Form* (Durham, NC: Duke University Press, 1995), 5–7. For a broader discussion of othering of the stranger, see Julia Kristeva, *Strangers to Ourselves* (New York: Columbia University Press, 1991).

Downloaded from https://www.cambridge.org/core. IP address: 18.118.208.173, on 26 Jan 2025 at 21:51:57, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009398152.005

their personal relationships with Indigenous individuals, enough to alter the momentum of postcolonial violence? This had been an implicit choice facing centuries of interlopers – and was also true for anthropologists pushing south from Buenos Aires into Argentina's interior.

Moreno: "A Sacrilege Committed for the Sake of Osteological Study"

Until the nineteenth century, a good portion of the southern half of the nation was largely independent territory, with an Indigenous majority loosely controlled by scattered state representatives in a handful of European settlements.[24] The official image of Patagonia was one of vast, "empty" space. Spaniards and Argentines imagined the South and its inhabitants as "at the edges of the world" and culturally marginal.[25] British explorer Julius Beerbohm, author of *Wanderings in Patagonia*, expressed a typical European attitude toward Southern Argentina in 1881, declaring that Patagonia would remain uninhabited forever.[26] Another trope about Southern Argentina was its supposed wildness, and in the modern expression, barbarism. This barbarism in turn linked Indigenous peoples with primitivism, brutal or animalistic violence, and racial inferiority, creating a dichotomy with "civilization" and legitimating increasingly violent measures to claim the land and tame its inhabitants. In the 1870s, fifty years after Argentina's independence from Spain, the Pampas were still inhabited by semi-sedentary communities with diverse identities and speaking different languages, and a shared history of intertribal relations for millennia before European incursions.[27] By 1870, an

[24] On the historical context of the racial concept in Argentina, see Paula L. Alberto and Eduardo Elena, eds., *Rethinking Race in Modern Argentina* (New York: Cambridge University Press, 2016).

[25] Claudia Briones and José Luis Lanata, "Living on the Edge," in *Archaeological and Anthropological Perspectives on the Native Peoples of Pampa, Patagonia, and Tierra del Fuego to the Nineteenth Century*, eds. Briones and Lanata (Westport, CT: Bergin and Garvey, 2002), 1–12; 1. See also Walter Delrio, *En el país de nomeacuerdo: Archivos y memorias del genocidio del estado argentine sobre los pueblos originarios, 1870–1950* (Viedma, Argentina: Editorial Universidad Nacional de Río Negro, 2018); Pilar Pérez, *Archivos del silencio: Estado, indígenas y violencia en Patagonia Central, 1878–1941* (Buenos Aires: Prometeo Libros, 2016).

[26] Alejandra Pero, "The Tehuelche of Patagonia as Chronicled by Travelers and Explorers in the Nineteenth Century," in *Archaeological and Anthropological Perspective*, eds. C. Briones and J. L. Lanata (Westport, CT: Bergin and Garveys), 120.

[27] In the northern area of the Pampas region, the Rankulche people lived; in the southern Pampas the Puelche and Mapuche. Most or all "Pampas" Indians may have called themselves Tehuelche (in Araucano, *che* means people and *tehuel* means south; *puel* means east). The Selk'nam live further south, in Tierra del Fuego. See Ana Ramos and Claudia Briones, eds., *Parentesco y política: Topologías indígenas en Patagonia* (Viedma, Argentina: Editorial Universidad Nacional de Río Negro, 2016).

Downloaded from https://www.cambridge.org/core. IP address: 18.118.208.173, on 26 Jan 2025 at 21:51:57, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009398152.005

estimated 40,000 Indigenous people lived in Southern Argentina, including the Pampas and Patagonian regions.

Centuries of intermittent violence between Indigenous peoples and Argentines peaked in April and May of 1879 in a short but intense military campaign the government dubbed the "Conquest of the Desert."[28] With this war, the Argentine state intended to seize the Pampas and achieve three goals: to prevent the Chileans from claiming Southern Argentina, to create settlements and Europeanize the province, and to exploit its fertile land for the production of cattle, wheat, and other crops. European Argentina lauded the Desert Campaign as a strategic success, yet the Mapuche called it the "Last Massacre." In a two-month period the Argentine military killed about 1,300 Rankulche, Puelche, and Mapuche people and captured or displaced 15,000 more.[29] The campaign also contributed to the developing idea of Argentine national identity as racially white.[30]

While the basic outlines of "the last massacre" and other postcolonial wars in late nineteenth-century Argentina are well known, less appreciated is that along with the generals and soldiers, there rode geographers, naturalists, and anthropologists. These scientists were without exception wealthy, upper-class men, who sought to build careers in arts and sciences through the study of their own largely unexplored country and its inhabitants. They were scientific pioneers and enjoyed celebrity as such. Elite men of science in countries like Argentina found themselves in a liminal state in transatlantic scientific power structures. Lords of their realms at home, they were looked down upon in North Atlantic (especially European) scientific institutions. Seeking to transcend centuries-long-repeated theories of Latin American inferiority, scientists like Moreno translated their desire for scientific recognition for themselves and for Argentina into an aggressive push inland. The anthropologists embedded in the military expeditions were primarily looking for artifacts and living

[28] See Larson, *The Conquest of the Desert*. On the political economy of frontier violence in Latin America, see Silvio R. Duncan Baretta and John Markoff, "Civilization and Barbarism: Cattle Frontiers in Latin America," in *States of Violence*, eds. F. Coronil and J. Skurski (Ann Arbor: University of Michigan Press, 2005), 587–620; orig. in *CSSH* 20: 587–620. On violence and "whitening" in historical and contemporary Argentina, see Gastón Gordillo, "The Savage outside of White Argentina," in *Rethinking Race in Modern Argentina*, eds. P. Alberto and E. Elena (New York: Cambridge University Press, 2016), 241–267; see also Susana Rotker, *Captive Women: Oblivion and Memory in Argentina* (Minneapolis: University of Minnesota, 2002).

[29] Larson, *Our Indigenous Ancestors*, 14–15.

[30] See María E. Argeri, *De Guerreros a Delincuentes. La desarticulación de las jefaturas indígenas y el poder judicial; Norpatagonia, 1880–1930* (Madrid: CSIC, 2005); Rodriguez, *Civilizing Argentina*; Mariela Eva Rodríguez, "'Invisible Indians,' 'Degenerate Descendants': Idiosyncrasies of *mestizaje* in Southern Patagonia," in *Rethinking Race*, eds. Paula L. Alberto and Eduardo Elena (New York: Cambridge University Press), 126–154.

Downloaded from https://www.cambridge.org/core. IP address: 18.118.208.173, on 26 Jan 2025 at 21:51:57, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009398152.005

subjects, to build collections in new (or planned) national museums. At their most ambitious, based on their immediate access to relics and living people, Argentine anthropologists hoped to contribute to new understandings of American populations, and provide insight on the origin and meaning of humanity itself.

Francisco P. Moreno was one of his nation's prominent scientists; born in 1852, he founded Argentina's first natural history museum, the Museo de La Plata in 1888, and eventually the first national park, Nahuel Hapi in 1903. One of the first Argentine anthropology textbooks described Moreno's groundbreaking role in the field: "Moreno's… long view, [and] his deep knowledge of the country, led him to launch a great initiative and to be forever known abroad as the authoritative spokesperson of this incipient Argentine science [of anthropology]."[31] Later in life, Argentines often referred to him as "*Perito* [the expert] Moreno," an honorific recognizing his achievements. Moreno hailed from Argentina's landed aristocracy; as a teenager, the land on his family's estate provided the naturalist with his first area of exploration. Like his scientific compatriots, he was also invested in the national and cultural development of the nation. He would eventually serve in federal government, building on his reputation attained from founding the Museo de La Plata, and his role in negotiating the border with Chile. Moreno also looked beyond the borders of his homeland to exercise his talents. He was an active participant in transnational anthropology, including time in Europe in the early 1880s, where he met with prominent scientists, gave talks, and visited museums. (Extended European trips were common, if not expected, of wealthy and educated young Latin American men at the time.) Moreno's wider circle included local intellectuals and government officials such as Ernesto Zaballos and Eduardo Holmberg, as well as foreign ones like Paul Topinard, Secretary of the Societé d'Antropologie de Paris, and Rudolf Virchow.

Moreno pioneered the collection and examination of human skeletons culled from his nation's territory and was one of a small handful of Euroamericans in the 1870s engaging directly with Mapuche, Aònikenk, and Genniken culture. As such, he left a rich record of his encounters with Indigenous people, both dead and alive. Human remains were central to Moreno's plan to expand the Museo de la Plata, an institution that became one of the top natural history museums in Latin America. The Museo's anthropology exhibits would eventually feature displays of human remains – about 1,500 pieces to begin with – built on Moreno's personal collection. His larger goal was to put together a collection of crania representing all of Latin America and the Canary Islands, whose early inhabitants he believed to be

[31] Feliz Outes and Carlos Bruch, *Los aborígenes de la República Argentina* (Buenos Aires: Estrada y Cia., 1910), 25.

Downloaded from https://www.cambridge.org/core. IP address: 18.118.208.173, on 26 Jan 2025 at 21:51:57, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009398152.005

related to South American Natives.[32] In addition to skulls, Moreno displayed skeletons, bone fragments, clay and bronze busts of Indigenous individuals, masks, and photographs and daguerreotypes of racial types. He even forced living people on display: between 1885 and the early 1890s, a group of Indigenous people resided in the Museo de La Plata.[33]

Moreno began digging for fossils and artifacts as a young man, and after his first early excursion in 1871, he undertook five more between 1876 and 1880. In his first scientific journey, he collected animal fossils, ceramic shards, and carved rock objects. Within a year, Moreno was headed to Patagonia to look for human skulls. Two years later, he was granted permission to join a military campaign to the South, a position acquired thanks to his family connections in government. In 1873, Moreno gathered skulls of long-dead inhabitants of the southern region, and also examined his Indigenous contemporaries, taking measurements of the skulls, heights, torso, and feet; separating women and men, he attempted to distinguish the individuals by bloodline (i.e., between tribes).[34]

Moreno's published reports on these journeys follow a typical pattern: first he would describe the landscape and expedition party members (including Indigenous guides); next he would recount the meetings with people in great detail. Finally, he would mention whether he had met his goal of gathering enough relics for the Museum. Once he had acquired objects to his satisfaction, he recorded that it was time to embark on his next excursion. This pattern underscored his personal prioritization of the collection of materials, with skulls and bones being the most coveted, over other aspects in the context of these expeditions. Moreno's narrative of his trip to Patagonia in 1875–1876 contained multiple descriptions of his personal and extensive meetings with Indigenous peoples, but repeatedly stressed that his main reason for the expedition was to gather objects for his collection. In the process, however, he also documented the living conditions, customs, habits, and beliefs of the people he met in rich detail. Moreno's second expedition brought him further into the southern region. Reflecting on this journey later in life, Moreno revealed these other goals:

> My objective was not only to study the regions along the way and cross the Cordillera to Chile, but also to see the Indians [*indios*] in their surroundings, far from civilization, by living in an Indian hut. I wanted

[32] Farro, *La formación del Museo de La Plata*, 139.

[33] There is little documentation of exhibits of living people in the Museo de la Plata, however, such exhibits are referred to in a number of publications. See Mónica Quijada, "Ancestros, ciudadanos, piezas de museo. Francisco P. Moreno y la articulación del indígena en la construcción nacional argentina," *EIAL* 9, no. 2 (1998): 21–46; Salvatore, "Live Indians in the Museum."

[34] Farro, *La formación del Museo de la Plata,* 59.

Downloaded from https://www.cambridge.org/core. IP address: 18.118.208.173, on 26 Jan 2025 at 21:51:57, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009398152.005

> to gather information from among these tribes facing extinction. I wanted to document what I simply knew from hearsay since that method fell short of my goals.[35]

In many instances, Moreno stayed for days, weeks, or months in Aònikenk communities, and sometimes referred to his hosts as his friends or *compadres*. Moreno mentioned that in some situations they brought him into kinship circles; he claimed that "the Chief Chacayal, my supposed father in law" called him Tapayo, "the name that some Indians gave me."[36] Later on in the narrative, Moreno reported that "as it is necessary [to have] a title equal to the chief, I take the name Comandante."[37] Years later, in his memoir, Moreno reflected on the rapport he felt with the tribal people. He described his "friendship," for example with chief Quinchahuala, who helped him acquire safe passage to Nahuel Huapi. "Quinchahuala took a liking to me since I accepted a plate of food from him consisting of cornmeal with blood and raw tripe, and I ate it without a visible display of revulsion. That was proof of my outpouring friendship . . . These foods were eaten as a matter of course in the wilderness. Suffice it to say, the stomach adapts to the circumstances far beyond one's expectations."[38]

Moreno's descriptions of these get-togethers read like diplomatic meetings. He emphasized the intimate, personal, and emotive exchanges between himself and Indigenous informants, as well as the bonds he believed were formed. And yet the differing intents among the actors surface in his recollections as well. They reflect his pattern of recording communication successes and failures, his observations of Indigenous appearance and behavior, participation or observation of rituals and trade, and finally his attempts to acquire scientific objects and body measurements. While meticulously describing the distinctive landscape, living or communal structures, clothing, and customs, he often advanced a larger perspective that modern civilization, in particular, science, was the antidote and inevitable corrective to tribal life patterns: "Only science can give us the conviction that everything stops after our departure from the earthly realm, but science is unknown in the uncultured primitive mind."[39]

Moreno's narratives also revealed the opportunities for real or potential reciprocity. For example, while in the field he relied on Indigenous hosts for his needs: food and shelter. In an 1878 description of his earlier Patagonian

[35] Francisco Moreno, *Perito Moreno's Travel Journal: A Personal Reminiscence*, compiled by Eduardo V. Moreno and translated by Victoria Barcelona (Buenos Aires: Elephante blanco, 2002), 31. All quotes from Moreno's *Travel journal* translated by V. Barcelona.

[36] Francisco Moreno, *Viaje a la Patagonia Austral* (Buenos Aires: La Nacion, 1879), 110, 112.

[37] Moreno, *Viaje*, 220.

[38] Moreno, *Travel Journal,* 39.

[39] Moreno, *Viaje*, 119.

Downloaded from https://www.cambridge.org/core. IP address: 18.118.208.173, on 26 Jan 2025 at 21:51:57, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009398152.005

expedition, he recorded a moment that recognized their status and power. In an encounter between his group and the Aònikenk (whom he called Tehuelche):

> Our provisions were extremely scarce, and consisted only in a few sandwiches, a gift of the Aònikenk Rosa, wife of Manuel Coronel, another good gaucho countryman who had accompanied Monsieur Pertuíset [a French explorer] to Tierra del Fuego, and who pretends to appear [*muy farzante hace aparecer*] like the Peruvian Yupanqui, [and] with the same formality later assured us that Rosa was a princess of the Imperial race of the Incas; to the sandwiches she added meat for a day and two boxes of patê de foie gras.[40]

One can almost imagine the camp site encounter, with Manuel Coronel and Rosa insisting on being seen, in demanding recognition of their ancestry. Even as they offered food to the soldiers and expedition members, perhaps in exchange for money, the Aònikenk also insisted on their presence, moreover in terms of their unique cultural heritage. Through these acts they declared themselves as alive in the present as well as connected to the past.

Moreno reacted to offers of reciprocity with conflicted emotions. In detailing his interactions, Moreno's memoirs contained more nostalgia than did his careerist field notes as an aspiring scientist. He vividly reminisced about his first encounters on his 1875 journey, reporting that he relied on four Indigenous guides to help him search for abandoned Indigenous settlements and burial grounds, as he attempted to "[develop] better relations with the Tehuelche, Gennaken, and Mapuche tribes."[41] At other times, Moreno recounted, the two parties relaxed together: "Every now and then, bands of friendly Indians pierced the silence and cheered us up. About a hundred of them traveled with us to Chichinal, now called General Roca. They made the days go by faster as they enthusiastically hunted ostriches."[42]

What these moments meant to the Indigenous travelers is difficult to perceive, as Moreno largely described them as backdrop to his adventures. Yet the living subjects of science, of course, had their own complex belief systems. At the time of the Pampas wars, Indigenous peoples held their own long-standing ideas and practices around death and the body.[43] Moreno's writing reveals that he was aware of their worldviews; he knew he was violating

[40] Francisco Moreno, "Apuntes sobre las tierras patagónicas," *Anales de la Sociedad Cientifica Argentina V* (1878): 1–19, 4.

[41] Moreno, *Travel Journal*, 28.

[42] Ibid.

[43] Pero in Briones and Lanata, *Archaeological and Anthropological Perspectives*, 117; Celia N. Priegue, "Mortuary Rituals Among the Southern Tehuelche," in *Archaeological and Anthropological Perspectives on the Native Peoples of Pampa, Patagonia, and Tierra del Fuego to the Nineteenth Century*, eds. Claudia Briones and José Luis Lanata (Westport, CT: Bergin and Garvey, 2002), 54.

Downloaded from https://www.cambridge.org/core. IP address: 18.118.208.173, on 26 Jan 2025 at 21:51:57, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009398152.005

Indigenous peoples' bodies *and* their belief systems. For example, reflecting on a visit in 1874 to a burial site called "Indian Pascual's ranch," Moreno mentioned that "one of [Pascual's] sons died there, and as the Indians believe that death takes over the place where one person died and all the other members of the family perished if they remain there, Pascual moved by setting fire to the cursed dwelling [*toldo*; tent made of leather]."[44]

Years later, Moreno would describe in his memoirs an incident in which he approached a burial heap near Chocón-Geyú, which, according to his local guides, held "nine burial mounds made of loose stones and dry branches [covering] the skeletal remains of an entire Indian family."[45] The family had died in a sudden snowstorm. Moreno elsewhere discussed the Aònikenk beliefs about the afterlife, or as he described it, their "fetish," which he described as such: "The Indigenes believe in the persistence of the spirit and in the voyage that takes them to another world after having abandoned, by death, the body that generated it."[46] He expressed distaste for their views, which he saw as primitive superstition: "How much better would it be if they recognized [death] as the work of nature! But let us not blame the savage. We ourselves, the civilized, are full of superstitions, some worthy of the Southernmost people [*australianos*], and we are generally the same. We deny the tangible, to believe in the intangible."[47] Moreno saw himself as an enlightened, forward-thinking scientist. Metaphysical beliefs, whether rooted in Indigenous or European, Christian worldviews, were trumped by science. And science demanded skulls.

Moreno's single-minded drive for skulls, in fact, ultimately overrode his ambivalence about Indigenous peoples' humanity. Moreno saw people as obstacles in his path for human *materiel* in three ways. His scientific and national drives led Moreno to reduce Indigenous people to body parts, to overlook their individual identities and define them primarily as members of a group, to in effect "kill" and dismember them metaphorically before their actual demise. Writing to his father from Fort Mercedes in October 1875, Moreno reassured him that "I could not be in better health. I just had a minor headache on the day I arrived but finding the Indian bones cured it completely."[48] On an earlier journey, in April 1873, he celebrated his accomplishments in terms of the wealth of human remains: "I conclude by providing a list of the principal *objects obtained* during my short trip; [I am] happy if this result can demonstrate the anthropological riches contained in the valley of

44 F. Moreno, "Cimetiéres et paraderos préhistoriques de Patagonie," *Revue d'anthropologie* (1874): 72–90, 84.
45 Moreno, *Travel Journal,* 30.
46 Moreno, *Viaje*, 94.
47 Ibid., 107.
48 Moreno, *Travel Journal*, 64.

Downloaded from https://www.cambridge.org/core. IP address: 18.118.208.173, on 26 Jan 2025 at 21:51:57, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009398152.005

the Rio Negro."[49] He listed sixty skulls "of both sexes," along with two skeletons, tools, pottery, and wood items. The skulls had a variety of characteristics, Moreno noted, including signs of cranial deformation, a topic of great fascination to anthropologists at the time. Despite the regrets he expressed toward the end of his life, Moreno's scientific agenda in the field led him to a pattern of deception (and self-deception) that included violating his informants' trust, bodily integrity, and belief systems. It also precluded, or at least delayed, an expansion of options for ethical norms of interaction in the emerging field of Argentine anthropology.

Moreno described an encounter in 1874 that reveals the subterfuge and duplicity required to acquire skulls and human remains from people and communities with whom he sought (or claimed to seek) emotional kinship.[50] Any moral calculation went out the window when presented with prime objects: human skulls. He frequently noted Indigenous peoples' agitation at and refusal of invasive requests. Moreno's awareness of these refusals was clear, as he wrote in a top French anthropology journal:

> I was able to get six of these painted skulls, but I only kept two complete ones; they were exhumed very quickly, as the Indians opposed it. While I was busy collecting anything that could be of interest to my studies, a few Indians from the family of the former owner of the place *approached to observe me and to ask what I was doing*. My answer that I was only concerned with the stones did not satisfy them, [so] they called their leader, Pascual, to drive me away. *This Indian forbade me* to touch anything; he then told Mr. Real, who accompanied me, that he was a fool to allow me to extract these bones, which belonged to the Tehuelche Indians and were red because they had died of an epidemic of small-pox a thousand years ago. The Indian believed this, indicating that he did not know which race of men the rest of them were, and fearing smallpox like the *galichu* (devil), he changed his mind and allowed us to extract the bones, which we did immediately by picking up all the objects that we could.[51]

Similarly, a few years later, during his 1879 expedition, Moreno confessed his manipulation of one of his Aònikenk "friends" (an affective term similarly deployed in the 1912 Yale Expedition, as described in Adam Warren's chapter in this book.) Describing the interaction, Moreno revealed that:

> He consented that we photograph him, *but by no means wanted that we measure his body and even more so, his head*. I do not know the source of his strange preoccupation, but later, upon returning to meet him in

[49] Moreno, "Cimetiéres," 88. Emphasis added.

[50] For a discussion of reciprocity and its breakdown in twentieth-century anthropology, see Anderson, *Collectors of Lost Souls.*

[51] Moreno, "Cimetiéres," 85–86. Emphasis added.

Downloaded from https://www.cambridge.org/core. IP address: 18.118.208.173, on 26 Jan 2025 at 21:51:57, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009398152.005

> Patagones, although continuing to be friends, *he did not allow me to approach him* while he was drunk, and a year later, when I returned to this site to embark on my journey to Nahuel-Huapí, *I proposed that he accompany me and he refused, saying that I wanted his head*. This was his destiny. Days after my departure, he was treacherously taken to Chubut and there murdered by two other Indians during an orgiastic night.[52]

That was not the end of the story, however, at least for Moreno:

> Upon my arrival, I learned of his disgrace, [and] figured out the place in which he had been buried and, in the moonlight, exhumed his cadaver, preserving the skeleton in the Anthropological Museum in Buenos Aires; *a sacrilege committed for the sake of the osteological study of the Tehuelches* . . . I did the same with the Chief Sapo and his wife, who had died at this spot a few years earlier.[53]

We can only imagine the horror or dismay the Aònikenk experienced; the death and theft of body parts was a violation of their sensibilities.

Despite his multiple intense and personal encounters with the Mapuche and others, Moreno repeatedly rewrote reality, describing the Indigenous peoples of Argentina as either disappearing or disappeared. In 1874, Moreno remarked that in Carmen de Patagones and Chubut, in the Northern part of the province, even though:

> civilization has barely penetrated there . . . The nomadic tribes . . . are marching ever faster towards their extinction, dragged [there] by deadly causes and absorbed through civilizing forces that will replace them through the peaceful possession of the land. And, these remote and extensive regions, until recently [seen as] mysterious and the subject of fables, will pass to the domain of science that studies everything, offering more appeal and utility.[54]

Thus, he constructed his Indigenous subjects as already dead, in the past – therefore available as *materiel* for his science, as well as labor power needed for Argentina's economic expansion.

Moreno, especially as time went by, not only romanticized the "disappearing Indian," but also presented himself as the champion and defender of Indigenous humanity. In his old age, Moreno would wax nostalgic, even mildly regretful, about the drastic decline in Argentina's Indigenous population after 1880, although he stopped short of acknowledging his role in those disastrous events. In his memoirs, Moreno wrote:

52 Moreno, *Viaje*, 93. Emphasis added.
53 Ibid.
54 Moreno, "Apuntes," 5.

Downloaded from https://www.cambridge.org/core. IP address: 18.118.208.173, on 26 Jan 2025 at 21:51:57, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009398152.005

> I hope I will have enough time to report on my impressions of the primitive environment in which these native tribes lived. Indeed, I was the last one to experience them before they were wiped out by those who never bothered to listen to opposing views. I lived among these self-reliant natives, masters of highlands and plains, followers of no laws other than those imposed by their limited needs.[55]

Viewing Indigenous peoples as part of the natural world was closely linked to a commonly held idea that they were on the brink of extinction. This, too, was a widely expressed belief among late nineteenth-century European and American anthropologists, and similar to those in the United States but not common in most other Latin American countries, which had large Indigenous and Mestizo populations. The act of retrospection had inserted nostalgia in Moreno's narrative.

Moreno's reminiscences were no doubt altered by Indigenous peoples' marked failure to disappear, that is, their continued presence, survival, and survivance. Recalling a moment of shared experience during his past adventures between himself and local people, Moreno recalled much later:

> During those hunts with elusive nomadic tribes, or when we'd take a moment to rest, I would often talk to my Indian guides about the future of these territories without stopping to think whether in my need to find an outlet for my aspirations I was exposing myself to harm. I would speak to them as I satiated my hunger with raw intestines from a worn-out mare or eagerly watched a tasty, skewered ostrich being barbecued over heated rocks, a cooking method that preceded the use of pottery. It gave me great pleasure to recall this scenario twenty-five years later when I revisited the same locales and saw that they had blossomed into towns. *Perhaps my former listeners' grandchildren were attending the local schools*.[56]

Here Moreno, astonishingly, projected a place for Indigenous peoples in Argentina, if not a peaceful coexistence. Reflecting in particular on the role he had played in military violence, Moreno lamented the loss of life on "both sides." Time had made Moreno charitable toward his former frenemies, even stating that the European Argentines had committed far greater atrocities. Indigenous peoples, he now judged, saw themselves as defending their own land, and "they also vividly recall the government's 'Desert Campaign,' dating back less than twenty years, in which executions were almost a daily occurrence." He concluded with a plea for assimilation, to heal the national body and make up for the slaughters: "Our beloved country thus lost thousands of her native sons, useful hands when properly overseen! Even as we speak, those

[55] Moreno, *Travel Journal*, 32.
[56] Ibid., 29. Emphasis added.

Downloaded from https://www.cambridge.org/core. IP address: 18.118.208.173, on 26 Jan 2025 at 21:51:57, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009398152.005

who view the natives without bias can see that the remaining few have more good than bad in them."[57]

Moreno's words revealed the emotional imprint made during his interactions with numerous Indigenous people, that he saw them, then and subsequently, as complex, living human beings. At the same time, he opted repeatedly to exploit their bodies in service to his professional and nationalistic goals. Far from a paradox, however, these two seemingly incompatible positions are causally related. Moreno's proximity, immediacy, and the personal nature of his encounters in fact heightened his sense of ambivalence toward his Indigenous neighbors, and, by creating discomfort and unease, ultimately bolstered his urgency to subordinate and erase them. Moreno, like most other Argentine anthropologists at the turn of the twentieth century, found annihilation the best response to the disquiet of his conscience.

Virchow and American Skulls: "These People … Destined to Be Presented Here Today"

Across an ocean, Rudolf Virchow also prepared to engage with human remains plundered from Argentina. In 1871, he awaited a precious shipment of skulls from Peru and Argentina for what would be his first foray into an extensive study of American skulls. By then, Virchow was established as a pioneer of forensic science, and had helped initiate a whole new discipline: *Anthropologie*, the study of physical remnants of ancient and primitive societies. While secondary to his work in pathology, he pursued his interest in craniometry for the next thirty years, amassing thousands of skulls that he stored at the Pathology Institute at the University of Berlin.[58] Virchow's commitment to anthropology is reflected in his founding role in creating the first Berlin Anthropology Society [*Berliner Gesellschaft für Anthropologie, Ethnologie und Urgeschichte*, or BGAEU] in 1869.[59] Never to set foot in the Americas himself, Virchow had commissioned the skulls from adventurers in the field as early as the late 1860s, aided by local colleagues in Argentina and Central America.[60] Over the next decades, Virchow published numerous analyses of these skulls, including a significant volume on American craniometry in 1892.[61]

[57] Moreno, *Travel Journal*, 108.
[58] Massin, "From Virchow to Fischer," 85.
[59] See Patrick Schilling Dowd, "Rudolf Virchow and the Science of Humanity," PhD thesis, University of Pittsburgh, 1999; Rudolf Virchow, "Schädel von Chiriqui (Panama)," *Sämtliche Werke* 52 (1871): 9.
[60] Virchow, "Schädel von Chiriqui (Panama)," 9.
[61] Rudolf Virchow, *Crania ethnica americana. Sammlung Auserlesener amerikanischer Schädeltypen herausgegeben von Rudolf Virchow* (Berlin: A. Asher & Co., 1892). See also Byron A. Boyd, *Rudolf Virchow: The Scientist as Citizen* (New York: Garland, 1991); Gabriel Finkelstein, *Emil du Bois-Reymond: Neuroscience, Self, and Society in Ninteenth-Century Germany* (Cambridge, MA: MIT Press, 2014).

Downloaded from https://www.cambridge.org/core. IP address: 18.118.208.173, on 26 Jan 2025 at 21:51:57, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009398152.005

As Virchow pursued cutting-edge work in forensic anthropology, with a focus not just on German subjects but global ones, his international reputation grew. He was a key figure in building anthropological institutions at home, such as the Berlin Ethnological Museum. At the same time, as an active early Americanist he corresponded with, taught, or mentored nearly all the well-known scientists exploring the material traces of human societies in the Americas and around the globe. Virchow, like many European Americanists at this time, relied on collectors and informants to find and ship him evidence for analysis.[62] He was an armchair scientist, distant for the most part from any face-to-face experience with Americans. Virchow corresponded frequently about skulls with scientists in the field, including other German-speaking anthropologists working in the Americas.

One of Virchow's most important South American correspondents was Francisco P. Moreno. The Argentine exchanged publications with Virchow and procured human remains for the German to study. In July of 1878, Moreno wrote to Rudolf Virchow to thank him for the BGAEU's invitation as a corresponding member. In this letter (likely translated into German on Moreno's behalf), and in another written three days later in Spanish, to a German diplomat, Moreno acknowledged the honor and also expressed his hope that "there will arrive the opportunity to be useful."[63] Similarly, a form letter (in French) from Francisco Moreno on a Museo de La Plata letterhead to the BGAEU in 1890 reflected the intellectual and material exchange between Europeans and Latin Americans. Thanking the German organization for the gift of a brochure, the letter offered to continue the "exchange of objects and publications." Moreno's letter suggested the unique value of his collections: they contained "all the information [one] may require about the physical and moral history of the southernmost area of America."[64]

Virchow published his first Americanist study, a description of a single skull from Panama, in 1871. The skull, according to Virchow, had been "rescued from the old Indian burial ground" and brought to Europe by a former French consul in Panama.[65] According to Virchow, the burial site included various other artifacts, including jeweled objects and animal figures. Virchow, however, was only interested in the skull, even though it was badly damaged. He measured it carefully, reporting the dimensions. Just a few years later, Virchow was able to locate larger groups of skulls and carry out comparative

[62] For a discussion of the scientific division of labor in transatlantic archaeology see Podgorny, "Bones and Devices." See also David N. Livingstone and Charles W. J. Withers, eds., *Geographies of Nineteenth-Century Science* (Chicago: University of Chicago Press, 2011).

[63] Francisco Moreno to Baron de Holleben, July 23, 1878, BGAEU MIT260/1–3, bl. 2–3.

[64] Francisco Moreno to the BGAEU, September 25, 1890, BGAEU MUS 37.

[65] Virchow, "Schädel von Chiriqui (Panama)," 9.

Downloaded from https://www.cambridge.org/core. IP address: 18.118.208.173, on 26 Jan 2025 at 21:51:57, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009398152.005

studies. Then, in 1873, Virchow wrote a report on some skulls that had been sent to him from Argentina by Burmeister, and about which he corresponded with Moreno, who himself had an even larger stash. Virchow carefully compared these four skulls with two in his possession from another region of Argentina, measuring the brain capacity, horizontal and vertical diameters, and length of various parts and bones. He also calculated ratios and percentages of the variable parts of the skull, which he then arranged in a chart in order to compute relative dimensions.[66] In carrying out these measurements, Virchow, despite his humanistic philosophy and geographical and emotional distance from his human subjects, trod the same path as Moreno. When given the opportunity to examine Indigenous people or their remains, Virchow also reduced them to body parts, classified those bodies by group, and placed them in racial schema. He too expressed anxiety about Native American extinction but consoled himself with a role in salvaging their bones. In this sense, Virchow engaged in a common anthropological practice of simultaneously personalizing his subjects and presenting them as "frozen in time" by the assumed fact of impending extinction.[67]

Virchow, a European outsider only indirectly affected by Argentina's internal power struggles, could more easily distance himself from the darker aspects of anthropological collection practices. He had no land holdings or emotional attachment to Argentina; rather, he identified as a seeker of knowledge about humanity. He enjoyed the luxury of remove from the souls who had inhabited the skulls in his possession. His scientific distancing was also a product of his philosophical outlook. Virchow was engaged in the most politically progressive movements of his time. Philosophically and spiritually, Virchow saw himself as the intellectual heir of Alexander von Humboldt, sharing the great naturalist's underlying belief in the unity of humankind. Uncomfortable with German and British hierarchical classifications of races and peoples, Virchow argued for diversity and variety in human culture.[68]

[66] Rudolf Virchow, "Altpatagonische, altchilenische und moderne Pampas-Schädel," *Sämtliche Werke*, 52 (1873): 20.

[67] See Johannes Fabian, *Time and the Other: How Anthropology Makes Its Object* (New York: Columbia University Press, 1983).

[68] Massin, "From Virchow to Fischer," 87; William Y. Adams, *The Boasians: Founding Fathers and Mothers of American Anthropology* (New York: Hamilton Books, 2016). Humboldt's cultural status influenced many German scientists' interest in America as a location for acquiring knowledge about the world. According to H. Glenn Penny, most late nineteenth-century German anthropologists were inspired by cosmopolitanism, not colonialism, and "not all explorers, German or otherwise, sought territory or possessions." See H. Glenn Penny, *Kindred by Choice: Germans and American Indians Since 1800* (Chapel Hill: University of North Carolina Press, 2013), 33; see also Matti Bunzl and H. Glenn Penny, "Rethinking German Anthropology, Colonialism, and Race." In *Worldly Provincialism: German Anthropology in the Age of Empire*, eds. Matti Bunzl and H. Glenn Penny (Ann Arbor: University of Michigan Press, 2003).

Downloaded from https://www.cambridge.org/core. IP address: 18.118.208.173, on 26 Jan 2025 at 21:51:57, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009398152.005

In fact, he was part of a greater scientific enterprise in the human sciences and biomedicine, embraced by scientists across the Atlantic world, to seek universal truths about human nature and origins. Ironically, it was clear that they needed to look to the Global South for answers to the mysteries of humankind. As inhabitants of these areas exhibited, supposedly, various degrees of "savagery" and "barbarism," scientists experienced ambivalence about their subjects and themselves. They struggled to reconcile competing ideas about universal humanity and racial hierarchies.[69]

At the same time, and much like his Argentine counterpart, Virchow's ultimate ambition vis-à-vis America was the acquisition of Indigenous body parts for science.[70] In the 1873 article, Virchow recounted how he acquired the skulls of two "Pampas Indians," characterized not as humans who lived in community with others, but as members of a racial group. In his discussion of how he acquired the skulls, he repeated the account that an Argentine bureaucrat he was working with, Herr Oldendorff, wrote in the letter that accompanied the skull to Berlin: "I came to possess the Pampa-Indian skulls as per your wish through Herr Litzmann, and it was taken care of through arrangement by my friend General Rivas, commander of the southern border of this province . . . It is not so easy to acquire full blood Pampa-Indian skulls, as there has already been much cross-breeding with the mixed races."[71] The remains uncovered by locals such as Olberdorff and Francisco Moreno were not enough, Virchow stated. "One can only hope . . . that other areas of South America can be searched."[72]

As he racially parsed the skulls in terms of groups, Virchow also speculated about their individual identities. Despite no direct contact with Indigenous people at this point, Virchow described in the 1873 article what he imagined was their typical physical appearance, including a detailed description of infant board swaddling that might result in a particular formation of the skull. Virchow also mentioned that Oldendorff had noted that one of the old Pampas Indian skulls was that of the "*formidable Capitanejo*, known to and feared by our border patrol as '*Juan por Siempre*' [Juan Forever]; a horribly bloodthirsty bandit (his forehead is nearly two fingers wide) who carried out numerous murderous and harmful deeds."[73] Here he combined tropes of

[69] See Anderson et al., *Unconscious Dominions* for parallels observed in psychoanalysis in colonial contexts.

[70] Friendship networks among scientists from Europe and Latin America were crucial to the advancement of their work; see Patience Schell, *The Sociable Sciences: Darwin and His Contemporaries in Chile* (New York: Palgrave Macmillan, 2013).

[71] Virchow, "Altpatagonische," 20.

[72] Ibid., 27.

[73] Ibid., 20.

Downloaded from https://www.cambridge.org/core. IP address: 18.118.208.173, on 26 Jan 2025 at 21:51:57, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009398152.005

barbarism with anthropometric references to capture the danger of Capitanejo.

Virchow's persistent view of Indigenous peoples primarily as specimens was further reflected in his 1878 article on "American craniology," in which he sought to compile anthropometric data from available objects from North and South America. His main concern was the timing of different groups' appearance in the human record, based solely on skull shapes and measurement. Different skull types such as "brachycephalic" and "mesocephalic" would prove the relative antiquity of Indian ancestors in different parts of the continent.[74] He even attempted to create an atlas of "ethnic American skulls," organizing skulls by type.[75] Nevertheless, he avoided generalizing about a common origin:

> Today I confine myself to declaring that the physiognomic characters of the American heads show such a manifest divergence that the construction of a universal and common type of the American natives must be definitively abandoned. They are also mixtures of several native races, and the program of future research will find its final expression in the separation of different ethnic elements, which are included in the composition of the *various living and extinct tribes*.[76]

This last sentence reveals his ambivalent, uncanny sentiment toward the skulls: even at a remove, Virchow recognized the present-tense existence of his Indigenous subjects.

During the live demonstration with Pikjiojie, Batzinka, and Luis in 1879, Virchow seemed unsettled by their presence in his face-to-face meeting with the three Patagonians. (For an interesting parallel, see Sebastián Gil-Riaño's chapter in this book.) He announced to his audience, "These people [are] destined to be publicly presented today . . . You will be astonished, as I was, to see these extraordinary phenomena before you." Repeatedly referring to them as "people" [*Personen*], Virchow could not avoid describing aspects of their humanity. He noted that "According to the man [Pikjiojie], his tribe consists of only 80 individuals; for this reason, perhaps, it is the group of the Patagonian tribes closest to civilization." Virchow regarded the three as informants about their land and culture. But, in a dualistic feat of simultaneous humanizing and objectifying, Virchow placed his guests in a classificatory schema of nine Patagonian tribes, "as [Pikjiojie] named them."[77]

Virchow characteristically stated that he was hesitant to draw "anthropological" conclusions, that is, to weigh in on these tribes' place in the pantheon

[74] Rudolf Virchow, "La craniologie américaine," *Sämtliche Werke*, 52 (1878): 127–134.
[75] Virchow, "La craniologie américaine," 127.
[76] Ibid., 134. Emphasis added.
[77] Virchow, "Drei Patagonier," 198.

Downloaded from https://www.cambridge.org/core. IP address: 18.118.208.173, on 26 Jan 2025 at 21:51:57, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009398152.005

of human evolution. What he could do, however, was examine, measure, and describe in detail the people before him. Thus the bulk of Virchow's presentation in 1879 consisted of the comparative analysis of measurements and physiognomic description of both the three living subjects, as well as the skulls in his own collection. He conducted precise measurements of the skull dimensions for his audience, along with typologies of skull shape; he also provided charts of body parts and their lengths. He even compared the living Patagonian in front of him to skulls he had previously classified, from South America and Europe, concluding for example, that their heads appeared similar to the Sami people of Scandinavia.[78]

At the same time that Virchow poked, prodded, and measured the Patagonians like the scientific specimens he took them to be, he also noted aspects of their individuality. From his reports we can also infer the mood and experience of the Indigenous people on display. He described their temperaments, for example, stating that:

> Piktschotsche or Pikjiojie, 43 years old, from the Haveniken [*sic*] tribe ... usually exhibits a very serious, proud, and also melancholy appearance. He decides to speak, with difficulty; when it happens, the whole face suddenly comes alive, but he restricts himself to a brief, fast phrase. At rest, his face has a strict, almost hard expression: the fine lips are tightly closed, the lips around the mouth and nose are very prominent, the eyes look straight ahead.[79]

Virchow must have had to engage in extremely close proximity and communicated intimately with his guests to draw these conclusions, though, notably, he devoted significantly less detail to describing the woman and child.[80]

In theory, Virchow could retain a universalist view toward his human subjects, preserving a shred of their personhood, or at least withholding racial judgment until enough incontrovertible evidence emerged. He probably thought he was acting humanely, and compared to others, perhaps he was. Virchow held high moral ground for his era, based on his humanistic philosophy and clinical methods with Indigenous bodies. At the same time, when presented with opportunity to advance his science, he objectified dead and living Indigenous people, reducing them to specimens and body parts. Thus, the violent practices of colonialism, both foreign and internal, were to be tolerated, even subconsciously anticipated, in service to the scientific demand for human skulls.

[78] In this article, Virchow mentioned in passing that the skulls in question had been provided by Moreno. Virchow, "Drei Patagonier," 199.

[79] Virchow, "Drei Patagonier," 202.

[80] The next chapter in Virchow's larger investigation of anthropology and European cultural and racial studies was his *Crania ethnica americana*, published in 1892.

Downloaded from https://www.cambridge.org/core. IP address: 18.118.208.173, on 26 Jan 2025 at 21:51:57, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009398152.005

Skulls, Ambivalence, and Dehumanization

The encounters between these two skull scientists and their Patagonian contemporaries mark a fulcrum, a point of concentrated ambiguity, disquiet, and incipient violence that shadowed the more obvious acts of Argentine internal colonialism and the expansion of international science. The history of the American continent, writ large, can be understood as a series of multiple encounters, including but not limited to enslavement, migration, trade, colonization, war, and scientific exploration. At the same time, these large-scale confrontations contain millions of individual conflicts or compromises, each of which has indeterminate outcomes. These micro encounters are subject to global forces and the inheritances of power dynamics but also to the individual acts and motivations of the participants. Arguably, this is especially true for scientists facing patients or human research subjects.

To wit, late nineteenth-century physical anthropologists and their Indigenous interlocutors carried with them their respective beliefs about land, material wealth, bodies, and identities. Anthropologists like Moreno and Virchow operated within the structures of power born of rich pre-contact societies, centuries of intertribal relations, of European invasions, and finally of postcolonial exploitation. Forensic studies of Pampas skulls occurred in the context of a new era of racial violence with hemispheric and local relevance, and the manner in which the two scientists carried out their work on skulls ultimately served the goal of taking possession of the frontier societies opening up in the Americas. For them, like so many others in the history of anthropology, the temptation to dehumanize outweighed the rewards of cultural exchange, relationality, and reciprocity as they both achieved their goal: turning Indigenous bodies into evidence for the growing corpus of scientific knowledge.

Moreno and Virchow operated within distinct national traditions and worldviews, but their approaches to the Indigenous Other ran parallel and were, ultimately, extractive. They both felt ambivalent about their human subjects – at times disparaging, at others quite positive or even affectionate – as they prioritized their material and professional agendas over human relationships. For his part, Virchow's work on skulls contributed to the objectification and dehumanization of many others in the Americas in the following decades. He may have resisted hierarchical racial schemes but did not advocate for the full humanity of those he studied, or rail against racial violence, as field collector Alberto Frič, and later Boas, would.[81] When given the chance, Virchow chose to see Indigenous peoples as above all objects of science.

[81] The exceptional story of Frič, a Czech collector hired by the Germans to gather artifacts in the early 1900s, and who refused to participate further once he met real people in the

Downloaded from https://www.cambridge.org/core. IP address: 18.118.208.173, on 26 Jan 2025 at 21:51:57, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009398152.005

Virchow and Moreno, unable to convert their societies into polycultural utopias, and unwilling to fully drop out (as did Frič), remained agents of the larger system. In their personal interactions with their subjects, they may have sometimes held themselves in the balance, but in the end, both scientists participated in the objectification and dehumanization of the people who supplied their evidence. Ultimately, those bodies existed primarily as means to the ends of European science. The temptation of scientific progress was too great, and their status and access to political power made it easy for them to override whatever curiosity about, and personal frisson with, the Indigenous Other they might have had. Moreover, Moreno and Virchow's scientific wonder and care for Indigenous peoples did not lead to respect and coexistence (despite Moreno's later mild regrets), but rather facilitated participation in campaigns of violence and erasure, while convinced that they were on the right side of history.[82]

Moreno, as an Argentine, was more familiar with the Aònikenk, Mapuche, Genniken, and Selk'nam (Ona) peoples. The proximity of traditions created even more competition and ultimately appeared to short-circuit any generosity he might have felt. European-descended Argentines and Indigenous peoples had long had encounters on the land. This historical reality in fact raised the stakes, as the question of racial difference was a living and very real issue for Argentines. Moreno had more opportunity and proved more willing than Virchow to judge in detail his informants' characters and human value, to scrutinize them and their place in the pantheon of humanity. He was motivated in an immediate sense to objectify, classify, and distance himself from his human subjects. Primarily concerned with his professional standing and scientific zeal for collecting and reconstruction the national history of his country, he participated in the displacement of peoples and occupation of land carried out by his government. The annihilating impulse was heightened by the knowledge that Argentines of Indigenous and European descent could (and did) merge biologically and culturally. Moreover, he recognized, and recorded, in his many close encounters with Indigenous people their distress and refusal along with offers of reciprocity. Knowing that, Moreno's willful betrayal of his "amigos" was all the more brutal.

In the name of scientific exploration, Moreno and his colleagues sought to salvage the remains of a population whose attempted genocide they actively participated in. They focused great attention on Mapuche and Aònikenk peoples and sought to entomb them prematurely in the nation's past. As Argentines built their institutions, their nationalist science was indelibly marked by dynamics of internal colonialism and racism specific to their

field, demonstrates the range of the possible in the "moral field" of that moment. Penny, "The Politics of Anthropology."

[82] Smith, "Paradoxes of Dehumanization," 416–443.

Downloaded from https://www.cambridge.org/core. IP address: 18.118.208.173, on 26 Jan 2025 at 21:51:57, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009398152.005

particular settler society. Indeed, for anthropologists like Moreno, there is evidence that a psychological need to escape the discomfort of the uncanny led these men to distance themselves from the violent acts of erasure. In Argentina, especially, anthropologists paid a steep price for their scientific prestige: the denial of the Indigenous parts of the national body.[83]

More broadly, the story of skull science on the Pampa illustrates the importance of context on the formation of scientific and clinical method, and even anticipates the emergence of ethical conundrums in anthropological practice. Talented and successful scientists, then and now, are expected to overcome their repulsion for the strange. Anthropologists, specifically, must hold themselves in the tension of competing desires to understand and destroy. Like other human scientists, anthropologists have often been profoundly changed by their interaction with the objects of their research. Outcomes, however, are not predetermined. In the twentieth century, humanitarian, antiracist, and even egalitarian racial schema would emerge, and many anthropologists came to reject the destructive, colonializing aspects of science in this period. The incidents of skull science examined here, including the affective responses of scientists and human subjects alike, demonstrate both the utility and the limits of the moral field concept. Without the benefit of ethical norms and rewards and punishments for unethical behavior, however, it appears that the weight of science's material demands creates a strong bias toward dehumanization and away from reciprocity and respect.

[83] See Argeri, *De Guerreros a Delincuentes*; M. Rodríguez and Gordillo chapters in Alberto and Elena, eds., *Rethinking Race*. According to Walter Delrio, this tendency, which he argues should be defined as genocide, continues to the present day; see Delrio et al., "Discussing Indigenous Genocide in Argentina: Past, Present, and Consequences of Argentinean State Policies toward Native Peoples," *Genocide Studies and Prevention* 5, no. 2 (summer 2010): 138–159.

Downloaded from https://www.cambridge.org/core. IP address: 18.118.208.173, on 26 Jan 2025 at 21:51:57, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009398152.005