

## Subverting the Anthropometric Gaze

### Racial Science in the 1912 Yale Peruvian Expedition

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In the notebooks used to record the anthropometric measurements and physical features of Peruvian highlanders during the Yale Peruvian Expedition's 1912 visit to the Cusco region, the entry for Justo Rodríguez stands out. Listed as approximately thirty-eight years old and hailing from Abancay, in the rural province of Apurímac, Rodríguez encountered American researchers on August 23, 1912 at the Huadquiña Hacienda, a sugar and sheep-raising estate in the neighboring province of La Convención. There in the semi-tropical mountain forest region known as the *ceja de selva*, or eyebrow of the jungle, on the eastern slopes of the Andes, the expedition's surgeon, Luther T. Nelson, took his measuring tools and camera and sought to examine and photograph Rodríguez, one of six men he would study that day and 145 people he would examine that year on haciendas, at the nearby ruins of Machu Picchu, and in the city of Cusco. Working as part of a larger expedition remembered mainly for excavating Machu Picchu, Nelson's research agenda focused almost exclusively on Andean bodies, race, and health. Using pre-printed forms, he recorded descriptions and measurements of Rodríguez's hair, nose, teeth, eyes, skin, malar bones, head, face, trunk, arms, legs, hands, feet, and height, and he wrote the number 6 under "No. Children in Family."<sup>1</sup> Taking fingerprints from Rodríguez's right hand and writing that he "has Spanish blood," Nelson then added a surprising comment. Since he lacked a designated place for such information on the form, he wrote sideways up the middle of the second page "Subject became impatient and would not ~~stay~~ submit to further measurement."<sup>2</sup>

Rodríguez is the only research subject at the Huadquiña Hacienda whom Nelson described in his anthropometric notebooks as refusing to be measured. Indeed, his is the only reference of its kind in the 1912 anthropometric notebooks. It seems to correspond, however, to a more vivid description

<sup>1</sup> It is unclear whether this meant Rodríguez was one of six children or had six children; records of other research subjects suggest the latter is more likely.

<sup>2</sup> Yale Peruvian Expedition Papers (hereafter YPEP), Series III, 1912, Box 20, Folder 28, Notebooks of Luther T. Nelson.

elsewhere of what is likely the same man's act of refusal. Although Rodríguez is not mentioned by name, Nelson and others included an account of insubordination in their reports and correspondence, now archived in Yale's Sterling Memorial Library.<sup>3</sup> The Yale Peruvian Expedition's leader, Hiram Bingham, moreover, published the account almost verbatim in magazine and book-length descriptions of the expedition's work. For example, in *The National Geographic Magazine's* April 1913 article "In the Wonderland of Peru," Bingham conveyed the following:

At Huadquiña the Indians were ordered to a room to be measured. One subject objected strenuously and made it as difficult as he could for any measurements to be taken. He would not stand straight, nor sit straight, nor assume any position correctly. Finally, when the measurements were all taken, he was offered the usual *medio* for his trouble. This small coin, with which one could purchase a large drink of native beer, was usually gratefully accepted as a *quid pro quo*, but in this case the Indian decided he had been grievously insulted, and he threw the coin violently to the ground and strode off in high dudgeon.<sup>4</sup>

This account circulated worldwide not just in *National Geographic Magazine*, but also in publications that reprinted images and text from "In the Wonderland of Peru" in translation.<sup>5</sup>

What can these sources tell us about Rodríguez's motivations for insubordination and the experiences of others whom Nelson and his collaborators sought to measure and photograph between early July and mid November 1912? Was Rodríguez, the 102nd person measured, the only one who refused outright to cooperate? Did others engage or resist in ways not immediately recognizable to Yale scientists? Nelson's description of Rodríguez, hastily jotted down in pre-printed anthropometric notebooks, demonstrates how

<sup>3</sup> I cannot say conclusively that the account corresponds to Rodríguez. In the earliest version I have found, which appears in a handwritten letter Nelson wrote to accompany a draft of his report, the references to numbered photographic negatives differ by fourteen exposures from those listed for Rodríguez in Nelson's notebooks. This is likely an error by Nelson, who wrote the description aboard ship when returning to the United States, over three months after measuring Rodríguez. If Nelson's references to photographic negatives in his description are correct, then the account corresponds to Nasario Ortiz, a forty-year-old man from Talavera, in the province of Andahuaylas. Ortiz's anthropometric entry, however, is more complete than that for Rodríguez and mentions medical conditions, the nature and descriptions of which suggest he was more cooperative.

<sup>4</sup> Hiram Bingham, "In the Wonderland of Peru: The Work Accomplished by the Peruvian Expedition of 1912, under the Auspices of Yale University and the National Geographic Society," *National Geographic* 24, no. 4 (1913): 562.

<sup>5</sup> In Peru alone, "Wonderland" appeared in the periodicals *Peru To-Day*, *La Crónica*, and *Ilustración Peruana*; Amy Cox Hall, *Framing a Lost City, Science, Photography, and the Making of Machu Picchu* (Austin: University of Texas Press, 2017), 86.

record-keeping forms themselves, the categories that organize them, and scientists' use of them preclude making anthropometric research subjects' subjective experiences known. The notebooks included a category for "Expression of Emotions," which Nelson almost always left blank, and there was little room elsewhere for descriptions of behavior.<sup>6</sup> Subjective experience, in other words, did not have scientific value for the expedition; the form reduced the person to a set of measurements. By publishing the anecdotal description of resistance, on the other hand, Bingham transformed an Indigenous research subject's struggle into a whimsical account, one that helped frame the expedition's work as an adventure story designed to entertain a US and global reading public. Rather than providing insight into research subjects' moral thinking, the expedition's use of this anecdote mocked and stereotyped Indigenous behavior as irrational.

In many respects, reconstructing Justo Rodríguez's lived experience presents challenges similar to those Marisa Fuentes encountered in researching enslaved and formerly enslaved women's histories in Barbados. Fuentes found only fleeting references to such women in the colonial archive, and she argued popular depictions distorted understandings of who specific women really were and their positions in colonial society. The colonial archives' violence thus silences and prevents their histories from becoming fully knowable, and it challenges historians to find new ways to reconstruct what their lived experiences might have been like.<sup>7</sup> In the Yale Peruvian Expedition's archival records, traces of Indigenous and Mestizo research subjects' behavior and practices of engagement and refusal can be identified and recovered to some degree, however tentatively. That said, one must also take seriously our limited ability to fully access, via the archive, past Indigenous Andean forms of perceiving, knowing, and world-making, which Marisol de la Cadena describes in the present as both engaging and exceeding Western forms.<sup>8</sup>

Clues as to what the encounters themselves were like can nevertheless be found not only in the expedition's written records, but also in the hundreds of anthropometric photographs of those subjected to the researchers' measuring instruments and camera. These photographs were published as part of

<sup>6</sup> In perhaps the only use of the "Expression of Emotions" category, Nelson described the eighth person he measured, a twenty-seven-year-old man, as "sullen and stupid"; YPEP, Series III, 1912, Box 20, Folder 28, Notebooks of Luther T. Nelson.

<sup>7</sup> Fuentes, *Dispossessed Lives*. Fuentes builds on Rolph-Trouillot's *Silencing the Past*.

<sup>8</sup> de la Cadena, "Indigenous Cosmopolitics in the Andes: Conceptual Reflections beyond 'Politics'," 334–370; de la Cadena, *Earth Beings*. De la Cadena provides an earlier historical and ethnographic analysis of race and overlapping concepts of Indigenous and Mestizo identity in Cusco in *Indigenous Mestizos: The Politics of Race and Culture in Cuzco, Peru, 1919–1991* (Durham, NC: Duke University Press, 2000).

H. B. Ferris's "The Indians of Cuzco and Apurímac."<sup>9</sup> They shed light on how ordinary Indigenous and Mestizo people toiling on haciendas, working at Machu Picchu, and traversing Cusco's streets may have found more subtle ways than those Rodríguez employed to refuse or resist Nelson's requirements, and in some cases embrace and subvert them. Moreover, they along with written materials shed light not only on how US expedition members understood their work, but also on how local intermediaries and collaborators may have perceived the ethics and practice of racial science.

Building on Julia Rodríguez's study of expedition science's affective dimensions in this book, this chapter examines the history of moral thinking among Indigenous and Mestizo research subjects, foreign scientists, and local collaborators to reconstruct a fuller picture of the Yale Peruvian Expedition's field encounters and the forms of relationality they engendered and entailed. It argues that histories of the human sciences can and should combine Indigenous Studies methods and concepts with the moral field framework to understand more fully the nature of research encounters involving Indigenous peoples. Inspired by works by Helen Verran and de la Cadena on encounters between Indigenous and Western knowledge systems, this study posits "moral fields" in the plural to describe coexisting, separate, yet partially overlapping practices of perception, evaluation, and judgment among populations brought into contact with one another.<sup>10</sup> While the archival record has limits, it enables us to reconstruct behavior, identify the structures of expedition scientific research, and map the broader political and social world that shaped moral thinking and decisions among figures like Justo Rodríguez.

Focusing on moral thinking, however, should not require withholding judgment of historical actors or treating the past as separated off from the present. This chapter explores what kinds of decolonial work engaging the lived experiences and moral thinking of past research subjects can do in the present. It asks, in particular, how this history of engagement and challenges to the Yale Peruvian Expedition's racial science research might inform recent Indigenous encounters with transnational scientific projects rooted in similar settler colonial logics, such as that which Rosanna Dent describes later in this book and its counterpart in Peru. In this sense, it hopes to be of use to those

<sup>9</sup> H. B. Ferris, "The Indians of Cuzco and the Apurimac," Reprinted from the *Memoirs of the American Anthropological Association* 3, no. 2 (1916): 59–148, 60 unnumbered leaves of plates.

<sup>10</sup> De la Cadena, "Indigenous Cosmopolitics"; Verran, "A Postcolonial Moment in Science Studies: Alternative Firing Regimes of Environmental Scientists and Aboriginal Landowners," 729–762. For moral fields, see Goldstein, "Toward an Empirical History of Moral Thinking: The Case of Racial Theory in Mid-Nineteenth-Century France," 1–27.

engaged in moral thinking around the politics of human scientific research in the Andes today.

### A Note on Method

In *Decolonizing Methodologies: Research and Indigenous Peoples*, Linda Tuhiwai Smith noted in the 1990s that within many Indigenous communities, vigorous debate centers on the practices of research and the roles of both researchers and those who are researched. These debates, she suggests, can be summarized by questions about the ownership and control of research, the methods employed and questions asked, the production and dissemination of results, and the interests served.<sup>11</sup> I have taken these questions to heart in thinking through my work and subject position as a privileged, non-Indigenous, non-Andean, white American scholar from a North American research university. I am still figuring out the answers and sitting with the discomfort these questions present.

Admittedly, this chapter deviates from the decolonizing methods Smith and others rightly and forcefully articulate and promote. It is not a collaborative project framed in consultation with contemporary Indigenous people in the Cusco region, nor does it draw on their participation in gathering and analyzing archival materials or drafting findings. In part this is due to the location of archives in the United States, but it is also because I did not initially envision this project through a decolonizing framework. That said, there are also practical issues involved in seeking the approval of communities, whose past residents Nelson and his assistants measured and photographed. The anthropometric notebooks from 1912 include records of Indigenous and Mestizo research subjects from sixty-three communities in sixteen provinces.<sup>12</sup> Seeking the approval of each community's *asamblea comunal*, or communal assembly, is unfeasible. At the same time, the only entities that claim to speak for these communities as a whole are provincial and departmental governments and the Peruvian national government. For various reasons, I resist organizing my work around seeking approval from governing bodies and institutions of the Peruvian state, a political formation that has its own troubled history of anti-Indigenous racism and internal colonialism, and that continues to enact violent and extractive policies that disadvantage Indigenous peoples to the benefit of others.

Beyond these matters, I share historian of Hawai'i Adria Imada's concern about intruding in communities that may have been "talked out." Indigenous peoples in the Cusco region have been subject to what Eve Tuck describes as

<sup>11</sup> Smith, *Decolonizing Methodologies*, 10.

<sup>12</sup> Ferris, "The Indians of Cuzco and the Apurimac," 62.

“ongoing colonization by research,” and many communities are deeply entangled with foreign and domestic tourism, which require and entail particular ways of performing Indigeneity and engaging outsiders.<sup>13</sup> Taking these considerations into account, over time I hope to strengthen existing relationships in the Cusco region and explore new ones, while remaining mindful of Imada’s modeling of an “ethics of restraint.”<sup>14</sup> I also plan to make this research available in Quechua to Indigenous communities encountering a new generation of research scientists, who seek DNA samples in a renewed effort to study human variation.<sup>15</sup>

This project has also required that I give thought to the kinds of sources employed and how I describe and reproduce them. Working with anthropometric photographs and written records of the expedition’s racial scientific work is a fraught exercise. As the published account of Rodríguez’s refusal shows, the images and descriptions that Nelson and others created capture various subjective experiences for Indigenous and Mestizo research subjects, among them trauma, and the violence of transnational scientific projects rooted in US imperialism, its settler colonial logics, and its goals of capitalist expansion. To borrow from Eve Tuck and K. Wayne Yang, such sources serve as vestiges of “damage-centered research” in action and evidence of the harm it can cause.<sup>16</sup> That harm, moreover, extends beyond the invasive, ephemeral moments in which the images were taken and engages Peru’s history of internal colonialism. Amy Cox Hall argues that by emphasizing themes of poverty and primitivism, the expedition’s anthropometric images reflected and furthered damage, lending credence “to the notion of a glorious Incan past and a miserable indigenous present.”<sup>17</sup> As a central feature of creole nationalism long before Bingham arrived,<sup>18</sup> such depictions of Indigeneity denied

<sup>13</sup> Tuck, “Suspending Damage,” 415. Note that members of many communities view tourism positively, given the revenue and opportunities it provides. See *Earth Beings*, in which de la Cadena’s main interlocutor, Nazario Turpo, builds a career as an Andean shaman who meets with tourists.

<sup>14</sup> Adria Imada, *An Archive of Skin, an Archive of Kin: Disability and Life-Making during Medical Incarceration* (Berkeley: University of California Press, 2022). For my project, COVID-19 interrupted progress toward these goals.

<sup>15</sup> I hope my work’s discussion of engagement and resistance to earlier research efforts proves empowering, though I make no assumptions about specific communities’ positions on research initiatives.

<sup>16</sup> Eve Tuck and K. Wayne Yang, “R-Words: Refusing Research,” in *Humanizing Research: Decolonizing Qualitative Inquiry with Youth and Communities*, eds. Django Paris and Maisha T. Winn (Los Angeles: Sage Publications, 2018), 223–248. Here I also draw on Margaret Bruchac, whose work argues that practices of salvage anthropology facilitated and furthered efforts at Native populations’ disappearance. See *Savage Kin*.

<sup>17</sup> Cox Hall, *Framing a Lost City*, 179.

<sup>18</sup> There is significant scholarship on creole nationalism’s tenets and the inclusion or exclusion of Indigenous people. For Peru and the Andes, see Cecilia Méndez, “Incas Sí,

Indigenous people full rights of citizenship and correspond to what Aníbal Quijano theorizes as the centrality of race in the “coloniality of power.”<sup>19</sup>

In working with the 1912 images, I have chosen to reproduce anthropometric photographs only when their inclusion as historical evidence can be purposeful. Photographs appear when analysis of their composition or subjects’ visible actions and behaviors is necessary for understanding arguments about encounters with researchers and corresponding forms of resistance, refusal, engagement, and desire. In this sense, my approach builds upon scholarship on the history of photography in Andean and Latin American Studies, which emphasizes the behavior and self-fashioning of photographed subjects.<sup>20</sup>

### On Regional Contexts

What were social and political conditions like in the Cusco region in 1912, the year Nelson measured and photographed Justo Rodríguez and 144 other Indigenous and Mestizo research subjects? How might Rodríguez have experienced and navigated this world, and how did it inform the Yale Peruvian Expedition’s work? In *Los sueños de la sierra: Cusco en el siglo XX*, José Luis

Indios No: Notes on Peruvian Creole Nationalism and Its Contemporary Crisis,” *Journal of Latin American Studies* 28, no. 1 (1996): 197–225; Mark Thurner, *From Two Republics to One Divided: Contradictions of Postcolonial Nationmaking in Andean Peru* (Durham, NC: Duke University Press, 1997); Brooke Larson, *Trials of Nation Making: Liberalism, Race, and Ethnicity in the Andes, 1810–1910* (Cambridge: Cambridge University Press, 2004); Alberto Flores Galindo, *In Search of an Inca: Identity and Utopia in the Andes*, eds. and trans. Carlos Aguirre, Charles F. Walker, and Willie Hiatt (Cambridge: Cambridge University Press, 2010). For Latin America, see Rebecca Earle, *The Return of the Native: Indians and Myth-Making in Spanish America, 1810–1930* (Durham, NC: Duke University Press, 2007).

<sup>19</sup> See Aníbal Quijano, “Questioning ‘Race,’” *Socialism and Democracy* 21, no. 1 (2007): 45–53; Quijano, “Coloniality of Power, Eurocentrism, and Latin America,” *Nepantla: Views from South* 1, no. 3 (2000): 533–580.

<sup>20</sup> For the Andes, see Deborah Poole, *Vision, Race, and Modernity: A Visual Economy of the Andean Image World* (Princeton: Princeton University Press, 1997); Jorge Coronado, *Portraits in the Andes: Photography and Agency, 1900–1950* (Pittsburgh: University of Pittsburgh Press, 2018); Yazmín López Lenci, *El Cusco, paqarina moderna: Cartografía de una modernidad e identidad en los Andes peruanos (1900–1935)* (Lima: Instituto Nacional de Cultura, Dirección Regional de Cultura de Cusco, 2007); Jason Pribilsky, “Developing Selves: Photography, Cold War Science and ‘Backwards’ People in the Peruvian Andes, 1951–1966,” *Visual Studies* 30, no. 2 (2015): 131–150. For elsewhere in Latin America, see Kevin Coleman, *A Camera in the Garden of Eden: The Self-Forging of a Banana Republic* (Austin: University of Texas Press, 2016); Greg Grandin, “Can the Subaltern Be Seen? Photography and the Affects of Nationalism,” *Hispanic American Historical Review* 84, no. 1 (2004): 83–111; Deborah Poole, “An Image of ‘Our Indian’: Type Photographs and Racial Sentiments in Oaxaca, 1920–1940,” *Hispanic American Historical Review* 84, no. 1 (2004): 37–82.



Rénique describes the southern departments of Peru as a “land of Indians and lords, united by the bonds both violent and subtle of a paternalist culture woven over centuries.”<sup>21</sup> Yet, he and others also shed light on specific features of the Cusco region at this time, noting that broader economic changes and aspirations among the region’s elite in the previous decades had transformed conditions in the valleys to the north of Cusco, where Machu Picchu and the Huadquiña and Santa Ana haciendas are located. These changes did not put an end to “the inherited structures of colonial domination”<sup>22</sup> to which Indigenous people were subjected, but rather intensified them. Such intensification likely proved fundamental in shaping Indigenous peoples’ perceptions of the Yale Peruvian Expedition.

Long seen as a backwater in Peru, the city of Cusco was experiencing a resurgence in 1912. While parts of the regional economy had begun to grow and diversify as early as 1895,<sup>23</sup> such processes accelerated with the construction of a railroad connecting Cusco to Arequipa, other southern departments, and the port of Mollendo on the Pacific coast. The railroad opened in September 1908, inserting Cusco into a broader commercial network fueled by Arequipa’s expanding wool economy. In the department of Cusco the railroad transformed the power equation, resulting in importers-exporters from Arequipa joining with large hacendados of La Convención province, where Huadquiña Hacienda is located, and Lares province as the dominant sectors of the department.<sup>24</sup>

Located in the northern part of the department, La Convención and Lares were nowhere near the railroad line to Arequipa. They had been transformed, however, by efforts to modernize Cusco and expand its economy prior to the railroad’s inauguration. As Mark Rice explains, Machu Picchu’s environs were “not the uncharted wilderness described in Bingham’s accounts but a key economic frontier of Cusco.”<sup>25</sup> Beginning in 1897, members of the newly formed Centro Científico del Cusco (Cusco Scientific Center) argued that the eastern slopes of the Andes in these regions and elsewhere could become sites for increased production of lucrative goods; trade routes to the Atlantic, moreover, could be established via Amazon waterways. Motivated by the boom in rubber and gum exploitation already underway, their efforts to attract state investment increased the political and economic power of large hacendados from these provinces and the output of their estates. In the 1890s, a road

<sup>21</sup> José Luis Rénique, *Los sueños de la sierra: Cusco en el siglo XX* (Lima: CEPES, 1991), 29. Note: All translations from Spanish are mine.

<sup>22</sup> Rénique, *Sueños*, 32.

<sup>23</sup> Mark Rice, *Making Machu Picchu: The Politics of Tourism in Twentieth-Century Peru* (Chapel Hill: University of North Carolina Press, 2018), 18.

<sup>24</sup> Rice, *Making Machu Picchu*, 18.

<sup>25</sup> *Ibid.*, 19.



was blasted through the Urubamba Valley toward Vilcabamba to expand commerce with the area's rubber producers and haciendas.<sup>26</sup>

In 1910 and 1911, these same hacendados campaigned to create and extend the Santa Ana railroad north from Cusco to their provinces. Local politics focused on this project, which Peru's president, Augusto B. Leguía, approved. His decision reflected the persistence of an entrenched power structure in the Cusco region, in which large hacendados and other local powerholders called the shots and exercised influence over government officials. This structure had consequences for people like Justo Rodríguez. According to Rénique, "a large part of the Indigenous population remained at the mercy of local powerholders, resulting from a combination of economic forces and authority, of despotism and paternalism, a system known as gamonalismo."<sup>27</sup> As figures wielding authority, hacendados "could demand that indigenous people comply with a series of personal services, which despite being legally eradicated, would continue in effect until well into the twentieth century."<sup>28</sup>

As will become clear, the Yale Peruvian Expedition exploited these relationships between hacendados, local officials, and the national government in the city of Cusco and the region around Machu Picchu. They also drew on military support to carry out their work and gain access to Indigenous and Mestizo bodies, both as sources of labor and as subjects for anthropometric experimentation. These entrenched power structures, however, should not be interpreted as preventing resistance. Rather, while much scholarship on peasant rebellions in early twentieth-century Cusco has focused on the period after 1915 and especially the 1920s, the early 1910s were also a time of struggle. As Christopher Heaney notes, when Bingham arrived in Peru in 1911, President Leguía warned him that the region he intended to visit, the valleys of the Urubamba and Vilcabamba rivers, had witnessed upheaval a few months before, when "Indian farmers and rubber collectors there had rebelled against the region's landowners."<sup>29</sup> Describing the lower Urubamba Valley, Heaney adds that "The place was a human tinderbox" because "The state was weak, and the landowners dominated the peasants with a mixture of paternalism and abuse."<sup>30</sup> Some villages that had rebelled remained unwelcoming to American visitors.<sup>31</sup> Rodríguez's refusal should thus be understood within this

<sup>26</sup> Christopher Heaney, *Cradle of Gold: The Story of Hiram Bingham, a Real-Life Indiana Jones, and the Search for Machu Picchu* (New York: Palgrave, 2010), 84.

<sup>27</sup> Rénique, *Sueños*, 34.

<sup>28</sup> *Ibid.*, 33–34.

<sup>29</sup> Heaney, *Cradle of Gold*, 77.

<sup>30</sup> *Ibid.*, 97.

<sup>31</sup> Chaullay's residents "glared from their doorways at the tall white stranger and his hated military escort"; Heaney, *Cradle of Gold*, 98.

broader picture of simmering tensions, as should the behavior of others Nelson measured at Huadquiña Hacienda and elsewhere.

### **Expedition Strategies, Racial Thinking, and Coercion**

In this political, social, and economic context, members of the 1912 Yale Peruvian Expedition adapted their approach and reframed their own rationales to fit local conditions. That said, given that the expedition was the fourth of its kind that Hiram Bingham, a lecturer in history at Yale, led to South America, it also drew on his ingrained prejudices and learned strategies. Born in Hawai'i to American missionaries, Bingham trained as a historian at Yale, UC Berkeley, and Harvard. As Cox Hall notes, however, he "might best be characterized as an explorer and collector with a scientific purpose."<sup>32</sup> He was a generalist who ended up carrying out research on history, geography, and archeology before eventually entering politics. According to Ricardo Salvatore, he might also be considered a "gentleman scholar" with no financial limitations on travel overseas," since he had married an heir to the Tiffany fortune.<sup>33</sup>

An interest in exploring South America's past inspired and shaped Bingham's various trips. In 1906–1907, Bingham and Dr. Hamilton Rice, a fellow of the Royal Geographical Society, traveled from Venezuela to Colombia, retracing Simón Bolívar's route nearly a century earlier.<sup>34</sup> In 1908, before attending the Pan-American Scientific Congress in Santiago, Chile, Bingham traveled from Buenos Aires to Potosí to map the old royal road. He then continued with Clarence Hay, the secretary for the US delegation to Chile, to Cusco in early 1909, where they established contacts with locals and traveled to the ruins of Choquequirau. According to Salvatore, Bingham became fascinated with Inca civilization and history on this journey, most likely at a local museum of Incaica in Cusco, in a visit to the ruins of Sacsayhuaman, and through conversations with local informants.<sup>35</sup> This journey inspired a return trip with a team of researchers in 1911, in which Indigenous people brought them to Machu Picchu. Bingham's original goal was to find Vilcabamba, the site to which the Inca leadership had fled after the Spanish invasion, but Machu Picchu came to dominate his subsequent work.

Bingham's racism permeated all aspects of these journeys and was evident in his published accounts. According to Cox Hall, in his description of his 1906–1907 travels with Rice, Bingham acted "as the anointed translator and knowledge broker for future travelers" and explained the moral character of

<sup>32</sup> Cox Hall, *Framing a Lost City*, 5.

<sup>33</sup> Salvatore, *Disciplinary Conquest*, 40.

<sup>34</sup> *Ibid.*, 41.

<sup>35</sup> *Ibid.*

the people they encountered through racial categories prevalent at that time.<sup>36</sup> In his description of his time in Potosí in 1908, moreover, Bingham's racism and arrogance led interactions with an Indigenous man to turn violent. He wrote that when an innkeeper rejected a bill that appeared to be from an untrustworthy bank, "The idea of having a servile [Quechua] decline to receive good money was irritating." A scuffle ensued, in which Bingham, on horseback, rode the man up against a wall. The explorer wrote, "I fully expected that he would follow us with stones or something else, but as he was only a [Quechua] he accepted the inevitable and we saw no more of him."<sup>37</sup>

Bingham viewed Indigenous peoples in the Cusco region through this same disparaging lens in 1909, including them in broad generalizations about South Americans that ultimately shaped the 1912 expedition's thinking and behavior in the field. Influenced by salvage anthropology in North America and by settler colonial logics within science and beyond it, he organized the expedition's research around the assumption that "pure" Indigenous people would disappear as modernization progressed across the continent. He understood South America through an evolutionary and industrialist paradigm, one in which the continent's challenges stemmed from its climate and "race history" while the United States constituted "the apex of modernity."<sup>38</sup> As a result, from his perspective little effort could or should be made to learn from contemporary Indigenous people. Notably, none of the expedition members in 1911 or 1912 could speak the Indigenous language Quechua; it was not until the third expedition in 1914–1915 that any were tasked with learning it.<sup>39</sup> While Bingham wrote of "securing from the natives (by the offering of rewards for certain highly desired information) what data they could give regarding the presence of ruins, the frequency [*sic*] of certain animals, the peculiarities of the climate, etc.," he employed disparaging terms like "stupid boy" to describe young assistants and guides.<sup>40</sup>

Bingham's previous expeditions also laid groundwork for how the 1912 expedition would navigate local power relations and inequalities to curry favor, engage different communities, and secure Indigenous labor in the field. In his 1908 trip from Buenos Aires to Potosí and his 1909 trip to Cusco, for example, Bingham initiated a practice of coordinating with government officials, the military, and powerful landowners to facilitate his work. He did so through the language of friendship. According to Salvatore, when Bingham

<sup>36</sup> Cox Hall, *Framing a Lost City*, 10.

<sup>37</sup> Quoted in Heaney, *Cradle of Gold*, 40.

<sup>38</sup> Cox Hall, *Framing a Lost City*, 11.

<sup>39</sup> *Ibid.*, 15.

<sup>40</sup> YPEP, Series V, 1915, Box 28, Folder 19, "Methods Followed in the Field Work of the Peruvian Expeditions of Yale University and the National Geographic Society," 5; Series III, 1912, Box 19, Folder 15, Hiram Bingham, Journal, 6.

arrived in Potosí, “The local prefect received the U.S. party with red-carpet treatment. Celebrations in his honor lasted a week, including bullfights, dinners, balls, fireworks, and illuminations.”<sup>41</sup> When he and Hay traveled to Abancay, the city listed as Justo Rodríguez’s place of origin, some months later, they did so with a military lieutenant’s assistance. They were greeted by twenty-four landowners and soldiers, who “cheered and escorted the American *científicos* into the small city, where they met Abancay’s prefect.”<sup>42</sup> Leaving by mule two days later, Bingham and Hay were accompanied by the lieutenant and a team of Indigenous men the lieutenant had conscripted, who “were paid a pittance and could be jailed if they refused to work.”<sup>43</sup>

Bingham had no moral quandaries with these exploitative practices and returned to them in 1911, drawing on the support of the military and the Abancay prefect, who by then had become prefect of Cusco. Emphasizing the rhetoric of friendship and diplomacy in later published descriptions, Bingham wrote of first “establishing friendly relations with the foreign Government and securing of requisite permits from various governmental bureaus and introductions to large landowners; and second, in making local arrangements such as establishing connections with reliable business houses, purchasing equipment and supplies, and securing the most efficient native assistants.”<sup>44</sup> At the same time, he lamented building connections with locals as time “wasted in diplomacy” and noted that “stupid officials, suspicious land owners, and ignorant natives” could interrupt or undermine the expedition’s work.<sup>45</sup> The rights and wishes of Indigenous and Mestizo men, furthermore, mattered little to him. Two government officials accompanying the expedition traveled from farm to farm, greeting such men, and slipping silver dollars into their palms when they shook hands. In doing so, they effectively paid the men in advance for their work, “threatening them with imprisonment or worse if they refused.” According to Heaney, “The farmers pleaded that they had to tend to their crops, that their families could not spare them, that they lacked the food for a week’s march into the jungle. But the officials were implacable, and Bingham soon had a dozen porters.”<sup>46</sup>

In 1912, such practices formed a routine part of the expedition’s strategy, one consistent with its members’ views but infrequently mentioned in published accounts. Indigenous men from the town of Ollantaytambo served as conscripted paid laborers, having been rounded up by the governor and

<sup>41</sup> Salvatore, *Disciplinary Conquest*, 41.

<sup>42</sup> Heaney, *Cradle of Gold*, 50.

<sup>43</sup> *Ibid.*, 52.

<sup>44</sup> YPEP, Series V, 1915, Box 28, Folder 19, “Methods Followed in the Field Work of the Peruvian Expeditions of Yale University and the National Geographic Society,” 2.

<sup>45</sup> *Ibid.*, 7.

<sup>46</sup> Heaney, *Cradle of Gold*, 108–109.

imprisoned “to see that they did not run away” before joining the expedition.<sup>47</sup> Relations between these workers and American expedition members generated discord, with the reluctance of the former stemming from being uprooted from their communities and “forced into the abusive practices of the lower Urubamba, where tensions between Indians and whites ran high.”<sup>48</sup> Particular events further undermined trust and pretenses of actual friendship. At Mandor, Pampa workers encountered the stabbed body of an Indigenous man. They likely also knew that an Indigenous child had died accompanying Bingham’s expedition a year earlier, swept away by the Urubamba River under suspicious circumstances. At Machu Picchu workers set a fire that nearly took the lives of the Peruvian soldier accompanying the expedition and an expedition member, leading to suspicion of foul play.<sup>49</sup> While it is unclear if such stories reached Justo Rodríguez and informed his act of refusal the following month, they would have shaped the thinking and behavior of others conscripted to work for the expedition and measured by Nelson.

Tensions, resistance, and refusal of various kinds continued in the months that followed and during the 1914–1915 expedition. In analyzing Bingham’s correspondence, Salvatore notes signs of unease, including “Indian laborers who abandoned the camp without reason, peasants who refused to sell mules to the expedition, Mestizo guides who kept Indian laborers away from the Yale camp, and commoners who denounced the wrongdoings of the Yankee explorers to the press.”<sup>50</sup> Hacienda owners likewise did not necessarily look upon the expedition favorably, especially with regard to its hiring of workers. Although some hacendados such as Señora Carmen, the owner of Huadquiña Hacienda where Nelson measured Rodríguez, and the Duque family of Hacienda Santa Ana, coordinated with Bingham and formed friendships with him, in other cases the expedition disrupted long-standing patron–client relationships between hacendados and peons. According to Salvatore, when the expedition returned in 1914–1915, “landowners charged that the excavations were luring away their workers.”<sup>51</sup> This was partly because the expedition paid higher wages at \$1 per day and paid workers in cash. However, it also provided workers free medical care, which undermined hacendados’ prestige and “showed indigenous peasants a side of modernity that local landowners were not ready to embrace.” As a result, the Yale Peruvian Expedition, through its forms of recruitment, constituted a “menace, for they raised wages, defied traditional social hierarchies, and engaged peasants in the search for Inca artifacts.”<sup>52</sup>

<sup>47</sup> Ibid., 133.

<sup>48</sup> Ibid.

<sup>49</sup> Ibid., 133–134.

<sup>50</sup> Salvatore, *Disciplinary Conquest*, 93.

<sup>51</sup> Ibid., 88.

<sup>52</sup> Ibid., 90.

### Local Intellectuals, the “Indian Problem,” and Expeditionary Science

Racist views on Indigenous peoples also formed part of the moral thinking of urban Cusqueños who interacted with Bingham and his team, and who initially welcomed and then debated and critiqued the expedition’s work. As Mark Rice notes, “colonial era concepts of race and ethnicity remained stubbornly powerful”<sup>53</sup> in the early twentieth century. This was even true of intellectuals who campaigned to bring about Indigenous peoples’ uplift and fought against their exploitation on haciendas. Intellectuals in Cusco fell roughly into two different camps, traditionalists and indigenistas. The former sought to maintain long-standing social and political structures, while the latter positioned themselves as vindicating the region’s Indigenous peoples after centuries of exploitation. Such views among indigenistas, however, did not signify abandoning long-standing ideas about difference that characterized Peru’s entrenched internal colonialism. According to Yazmín López Lenci, indigenismo was “a theory woven together on an essentialist opposition between what is ours (*lo propio*) and what is others’ (*lo ajeno*), and thought about in essentialist racial categories.”<sup>54</sup> Moreover, as they sought to defend and bring about Indigenous peoples’ uplift, indigenistas engaged the logic of racial thinking and speculated about communities’ potential for modernization. The language used in indigenista scholarship bears this out. Research shed light on the “Indian problem,” the notion that Indigenous culture and living conditions hindered the region’s progress.<sup>55</sup>

When Bingham arrived in Cusco in 1911, he deliberately sought to build connections and alliances with indigenista scholars and their students at the local university. Recent political events had given rise to a new generation of intellectuals and students there, who sought to transform thinking about Cusco’s regional identity and its Indigenous peoples. Having formed the Asociación Universitaria (University Association) in 1909, students went on strike, closing the campus. This led President Leguía to appoint an American professor, Albert Giesecke, as the university’s rector with instructions to modernize it. Giesecke reorganized the university and created a more democratic environment, in which research about Indigenous peoples was encouraged. López Lenci writes that his administration emphasized “promoting among students knowledge of the existing reality in and around Cusco, and the requirement that they write on the basis of what they have seen and verified.”<sup>56</sup> Giesecke supported Quechua language classes and archeological

<sup>53</sup> Rice, *Making Machu Picchu*, 19.

<sup>54</sup> Lenci, *El Cusco, paqarina moderna*, 30.

<sup>55</sup> Rénique, *Sueños*, 58.

<sup>56</sup> Lenci, *El Cusco, paqarina moderna*, 93–94.

and ethnological research expeditions.<sup>57</sup> The number of Cusqueños doing research in the countryside thus grew significantly,<sup>58</sup> leading to broader practices that Jorge Coronado, describing indigenismo in Peru more broadly, characterizes as representing and speaking for Indigenous people.<sup>59</sup>

By establishing ties at the local university and the Sociedad Geográfica de Lima (Geographical Society of Lima), Bingham hoped to gain information and connections to facilitate his research. Through meetings and public talks, he gave local intellectuals the sense that “they had been invited to participate in this project of knowledge.”<sup>60</sup> Some specialists even traveled with the expedition and served as intermediaries. For example, a professor of Spanish and literature from the university, José Gabriel Cosío Medina, accompanied the 1912 expedition as the Peruvian government’s and the Geographical Society of Lima’s official delegate. Students also became involved. Among them were sons of hacendados and other families who held land in the Urubamba River Valley and along the Vilcabamba River. These students invited the expedition to visit their family estates, shared knowledge of ruins, and facilitated additional connections.<sup>61</sup> Such intermediaries proved crucial in enabling expedition members to conduct their work, despite doing so at a time when, according to López Lenci, “in confrontation with travelers’ representations of Cusco, there existed a struggle over representation, which was a struggle over the construction of place.”<sup>62</sup> Through collaboration, they influenced expedition members’ assumptions about the acceptable treatment of workers and research subjects.

Heated debate soon arose in Cusco over the expedition’s removal of artifacts from Peru. Nelson’s 1912 anthropometric research, however, never generated controversy or concern among students and scholars. This is true despite the intrusiveness, violence, and questionable ethics that characterized Nelson’s interactions. It may be partly attributed to the fact that, as others have shown, traveling research expeditions and local scientists in the Andes had already debated racial difference and employed anthropometric photography before the Yale Peruvian Expedition’s arrival.<sup>63</sup> Moreover, Cusqueños had been

<sup>57</sup> Rénique, *Sueños*, 50–53.

<sup>58</sup> *Ibid.*, 58.

<sup>59</sup> Jorge Coronado, *The Andes Imagined: Indigenismo, Society, and Modernity* (Pittsburgh: University of Pittsburgh Press, 2009). Scholars disagree as to whether indigenismo in Cusco was an elite project or one with significant popular dimensions. See de la Cadena, *Indigenous Mestizos*; Zoila Mendoza, *Creating Our Own: Folklore, Performance, and Identity in Cuzco, Peru* (Durham, NC: Duke University Press, 2007).

<sup>60</sup> Salvatore, *Disciplinary Conquest*, 84.

<sup>61</sup> Heaney, *Cradle of Gold*, 79–80.

<sup>62</sup> Lenci, *El Cusco, paqarina moderna*, 30.

<sup>63</sup> Poole, *Vision, Race, and Modernity*; Gabriela Zamorano, “Traitorous Physiognomy: Photography and the Racialization of Bolivian Indians by the Créqui-Montfort



carrying out racial scientific research for decades. One such scholar was Antonio Lorena, a physician who published extensively on racial differences and ideas about racial fitness beginning in the 1890s, and who invoked the logics of creole nationalism by questioning whether contemporary Indigenous peoples were related to the original inhabitants of the region responsible for its monumental ruins. As a member of the Sociedad Arqueológica Cusqueña (Cusco Archeological Society), his research continually emphasized the settler colonial idea that “pure” Indigenous peoples in and around Cusco were a race destined to vanish. In the years immediately preceding Bingham’s first trip to the region, Lorena’s work included comparing measurements taken from ancient skulls to the cranial dimensions of living Indigenous peoples thought to be free of racial admixture, who resided near ruins from which said skulls had been recovered. Lorena presented this study at the 1908 Pan-American Scientific Congress in Santiago, Chile, which Bingham attended.

Another scientist interested in questions of racial continuity or discontinuity, José Coello y Mesa, conducted research involving anthropometric and craniological practices not unlike those of the Yale Peruvian Expedition. As a delegate of the Asociación Pro-Indígena del Cusco (Pro-Indigenous Association of Cusco), Coello y Mesa analyzed skulls from other parts of Peru as well as human remains excavated near Cusco, comparing them to the region’s living Indigenous people. He aimed to determine whether multiple migration patterns explained what he perceived to be differences among Indigenous populations from distinct regions. He published his findings in 1913, having traversed the countryside around Cusco with scholars in years prior to measure community members in Pantipata, Colquepata, and Chincheros. His work and Lorena’s thus established the precedent of intrusive scientific research in these rural communities, at least one of whose residents Nelson later encountered and measured.<sup>64</sup>

The Yale Peruvian Expedition’s anthropometric research goals overlapped with Lorena’s and Coello y Mesa’s work around questions of racial origins, racial continuity and discontinuity, and ideas about the vanishing Native. It is unclear, however, to what degree Cusqueño racial scientists influenced Bingham’s and other expedition members’ thinking about anthropometry. Yale researchers did not acknowledge local researchers’ work in their publications. For example, H. B. Ferris, the physical anthropologist who analyzed

Expedition (1903),” *Journal of Latin American and Caribbean Anthropology* 16, no. 2 (2011): 425–455.

<sup>64</sup> See José Coello y Mesa, “Crania peruana por José Coello y Mesa,” *Revista Universitaria* 2, no. 5 (1913): 42–52; 2, no. 6 (1913): 2–30. Given that Nelson also measured at least one subject from Chincheros, and that Pantipata and Colquepata were not far from the expedition’s worksites and connected to Cusco through trade, Coello y Mesa could have already introduced some of Nelson’s research subjects to anthropometry.

Nelson's data back at Yale, instead described Nelson as conducting racial scientific work in response to the urging of the prominent Czech anthropologist Aleš Hrdlička.<sup>65</sup> Elsewhere, the expedition positioned itself as building upon other foreigners' photographic studies and anthropometric research, emphasizing works by Alcide d'Orbigny and Arthur Chervin on the Quechua and David Forbes on the Aymara.<sup>66</sup>

One way that the Yale Peruvian Expedition did differ significantly from local research efforts, however, was in terms of its structure and members' training. Bingham organized the 1912 expedition on a model developed in polar exploration, in which there was "a large, semipermanent, multidisciplinary team of experts organized like a naval expedition, whose captain won the lion's share of the credit."<sup>67</sup> This model relied on local Indigenous assistants, much like Naval Commander Robert E. Peary's expedition to the North Pole in 1909.<sup>68</sup> Looking back on the 1912 expedition's work, Bingham hailed it as a success and example of what multidisciplinary research based on friendship and camaraderie could achieve. The paleontologist's work, for example, had benefited from the civil engineer's discovery of a rare fossil. Similarly, the botanist had identified an important feature on an ancient monument that the expedition's archeologist had missed.<sup>69</sup> The contributions of local informants whom Bingham described through the language of friendship, on the other hand, were rarely acknowledged.

Despite receiving fame and credit for these exploits, most of the men from the United States working alongside Bingham possessed limited levels of specialized knowledge. None across the three expeditions had received extensive training in archeology, arguably the most important science for the expedition's work and reputation. They came from a world in which non-professional scientists were commonplace, and in which dabbling in science was not unusual among educated people. Lack of training, however, ultimately mattered little to Bingham, an explorer for whom ambition and outside sponsorship shaped and legitimated everything. While benefiting from local intellectuals' and others' research and insights, he portrayed his fellow

<sup>65</sup> Ferris, "The Indians of Cuzco and the Apurimac," 59.

<sup>66</sup> Relevant local studies nevertheless appeared in the *Revista Universitaria*. During the expedition's visit in 1912, for example, the journal published Humberto Delgado Zamalloa's "Apuntes etnográficos de los aborígenes del pueblo de Acomayo" [Ethnographic Notes on the Aborigines of the Village of Acomayo], an anthropometric study of Indigenous peoples south of Cusco. Other research underway examined questions of racial classification, degeneration, and criminality and customs and traditions among urban and rural populations of Indigenous descent.

<sup>67</sup> Heaney, *Cradle of Gold*, 69.

<sup>68</sup> *Ibid.*

<sup>69</sup> YPEP, Series V, 1915, Box 28, Folder 19, "Methods Followed in the Field Work of the Peruvian Expeditions of Yale University and the National Geographic Society," 3.

members' work as building upon a longer history of scientific expeditions and travelers' accounts of the Andes, such as those of Alexander von Humboldt, Clements Markham, and others.<sup>70</sup> According to Salvatore, Bingham "was trying to outdo the work of William Prescott and Sir Clements Markham" as the Yale Peruvian Expedition's scope expanded.<sup>71</sup> Bingham critiqued these travelers and others, arguing that "too often in recent years expeditions had gone out with a very narrow viewpoint, equipped only to do astronomical or anthropological or paleontological or physiographic work."<sup>72</sup> By concentrating the Yale Peruvian Expedition's work on the Cusco region, on the other hand, he sought to benefit from taking "a relatively small, unexplored area and covering it as thoroughly as possible, in a way making it a type area to which other areas can be compared."<sup>73</sup>

Cosío Medina noted the limited expertise of several of Bingham's men while also acknowledging their ambition and role as part of a transnational system of information extraction. Having been sent to accompany and observe the expedition, he wrote of Nelson's work:

In the Anthropology section, the same doctor has taken a great many measurements of native types, in different sections, of their size, physiological proportions, thoracic and pulmonary capacity, and visual faculty, as well as hundreds of photographic views of Indians, data from which he has not drawn a single mean proportion, because according to the contract he has with Yale University, he should take [the data] to that center so that it may be studied by a notable anthropologist.<sup>74</sup>

This was a system of imperial knowledge production, one Salvatore connects to the expansionist tendencies of US capital, technology, and culture.<sup>75</sup> However, as a participant in this system, Nelson, a knowledgeable surgeon, having been hired primarily to address the expedition's medical needs, mostly

<sup>70</sup> Cox Hall, *Framing a Lost City*, 7.

<sup>71</sup> Salvatore, *Disciplinary Conquest*, 60.

<sup>72</sup> YPEP, Series V, 1915, Box 28, Folder 19, "Methods Followed in the Field Work of the Peruvian Expeditions of Yale University and the National Geographic Society" (manuscript), 1.

<sup>73</sup> *Ibid.*, 4.

<sup>74</sup> José Gabriel Cosío, "Informe elevado al Ministerio de Instrucción por el doctor don José Gabriel Cosío, Delegado del Supremo Gobierno y de la Sociedad Geográfica de Lima, ante la Comisión Científica de 1912 enviada por la Universidad de Yale, acerca de los trabajos realizados por ella en el Cuzco y Apurímac," *Revista Universitaria* 2, no. 5 (1913): 22.

<sup>75</sup> While the Yale Peruvian Expedition is known for receiving support from the National Geographic Society and Kodak, various businesses contributed to the expedition and shaped its work. Winchester Repeating Arms Company supplied weapons, while Waltham Watch Company provided astronomical watches and chronometers; Salvatore, *Disciplinary Conquest*, 78.

served as a poorly trained anthropometric data collector.<sup>76</sup> Ultimately, his research would generate tense encounters with Indigenous and Mestizo people compelled against their will to serve as research subjects.

### Photography, Refusal, and Desire

How did Nelson undertake the expedition's racial scientific research? His diaries suggest he had no background in anthropometry prior to leaving for Peru, and that he had only studied Alphonse Bertillon's instructional works on standardized anthropometric measurements and photography during the ocean voyage to South America. Once in the Andes, the surgeon spent several months in 1912 photographing and measuring Indigenous and Mestizo people in urban and rural settings. He used camera equipment provided by Kodak along with a measuring set, which included long and short folding rods (rulers) for measuring height, a craniometer, two sliding compasses for large and small measurements, a steel tape, a grip dynamometer, and equipment for taking fingerprints. Numerous subjects measured and photographed were workers who accompanied the expedition and assisted in its excavations, while others had little or no relationship to it. In total, Nelson examined 145 people, all but one of whom were men, taking thirty-eight different measurements. His subjects ranged in age from seventeen to eighty-eight. Their photographs formed but a fraction of the 12,000 photographs taken between 1911 and 1915, of which 1,000 documented racial types and another 1,000 depicted Indigenous customs and social life.

As H. B. Ferris, the physical anthropologist who analyzed the data at Yale, described it, the research constituted an effort at "the acquisition of data for the study of the anthropomorphic and physiognomic characters of the Quichua."<sup>77</sup> A sense of urgency motivated this work, since "it is simply a question of a comparatively short time when there will be no race that has not suffered recent admixture."<sup>78</sup> Nelson's photographic records are notable, however, for deviating from the requirements and standards of anthropometric photography. He sought to mimic racial scientists' work in the United States and Europe, who in previous decades had made advances in its development. Indeed, building on the criminal identification method of Alphonse Bertillon in France, anthropometric photography had largely become standardized and was regarded as a reliable means to index precisely and scientifically the dimensions, features, and measurements of individuals. By following set

<sup>76</sup> Nelson's duties in 1912 also included studying coca's effects on Indigenous people, offering medical services to local communities, and studying health and disease prevalence.

<sup>77</sup> Ferris, "The Indians of Cuzco and the Apurimac," 59.

<sup>78</sup> *Ibid.*, 64.

Distance du sujet 2 mètres : Réduction 5 = Point de vue de la photographie n° 40.

Age app<sup>t</sup> ..... Age déclaré 59 ..... Né en 1853

Taille 1.78.0 { long<sup>r</sup> 19.4 Pied g. 27.4 n° de cl. 3 Cheveux ch. m. grs  
 Voûte { larg<sup>r</sup> 16.8 Médius g. 11.9 Barbe d. m. grs  
 Enverg. 1.81 { zyges 14.7 Auric<sup>re</sup> g. 9.9 Teint Po<sup>n</sup> 9 S<sup>c</sup> m.  
 Buste o<sup>n</sup> 95.2 Oreille dr. 6.7 Coudée g. 47.9 Cont<sup>r</sup> de l'iris g. { aur<sup>re</sup> 7.0 m. Main dr. ....  
 { pér<sup>re</sup> ad. v. m. Main g. ....  
 { part<sup>es</sup> .....

**Notes** ..... **Main droite** .....

**Pouce dr.** ..... **Index dr.** ..... **Médius dr.** ..... **Annulaire dr.** ..... **Auriculaire dr.** .....

*Dressé à Paris, le 7 Août 1912, par M. Bertillon*

**Figure 3.1** Self-portrait of Alphonse Bertillon, inventor of anthropometry, on anthropometric data sheet, dated August 7, 1912.  
 Source: Wikimedia Commons.

procedures for positioning subjects before the camera, by employing devices to hold them in place, by placing them in front of a neutral background, by controlling lighting, and by positioning rulers and measuring devices near them in the frame, racial scientists believed their photographs could reveal truths about the physicality of racial difference (Figure 3.1).<sup>79</sup>

<sup>79</sup> For analysis of Bertillon's criminal identification method and other approaches, see Josh Ellenbogen, *Reasoned and Unreasoned Images: The Photography of Bertillon, Galton, and Marey* (State College, PA: Penn State University Press, 2013); George Pavlich, "The Subjects of Criminal Identification," *Punishment and Society* 11, no. 2 (2009): 171–190.

Many of the conditions necessary for creating such photographs were unavailable to Nelson during his travels in the Cusco region. He did not have a formal photographic studio or a scientific laboratory for carrying out his work, but rather used a hotel room in Cusco and indoor and outdoor spaces on haciendas and at Machu Picchu to create makeshift studios for measuring and photographing subjects. His technology was also limited to tools and camera equipment brought from the United States. As a result, subjects appeared at various distances from the camera and often were not centered in the viewfinder properly, limiting the possibility of accurate comparison. Moreover, Nelson photographed them at angles in front of doorways, against stone walls or decorated adobe walls, or in exterior arcades with arches and cross-beams (Figures 3.2 and 3.3). His work thus failed to conform to one of anthropometric photography's key requirements: posing subjects against blank, neutral backgrounds without any depiction of depth as a means to prevent misperceptions of what constituted their physical form. To address this, Nelson sometimes improvised by hanging a sheet behind the subject, the edges of which are visible in some images (Figure 3.4). The photographs can thus at best be described as approximations of Bertillon's practices of "accurate" and "measurable" depiction. They failed to achieve the consistency of composition required for "objective," "scientific" visual analysis of the racialized physical form.

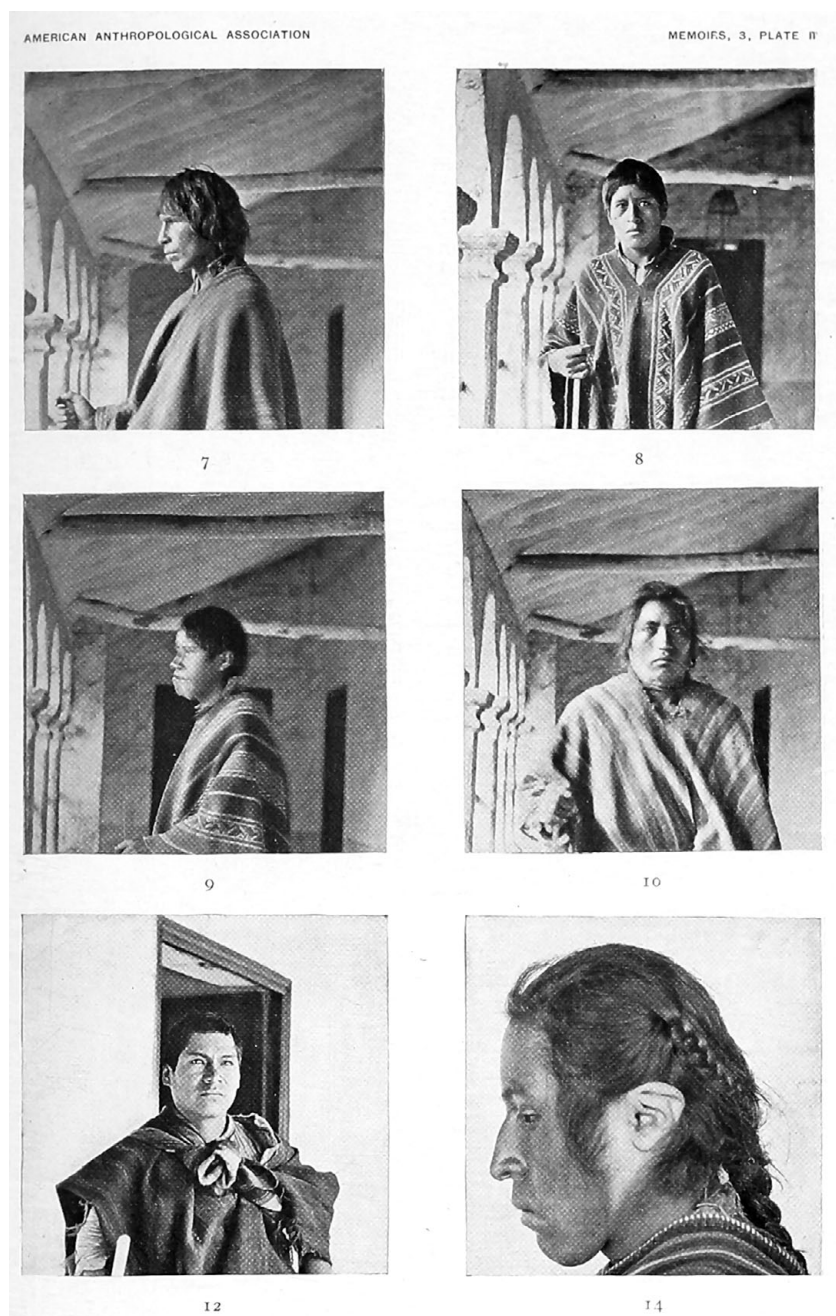
In journals and reports, Nelson and Bingham provided fairly curt descriptions of how the surgeon should acquire research subjects. These methods made use of local intermediaries while drawing on broader practices and assumptions about needing to engage and secure the cooperation of Indigenous people through coercion and force. For example, at the Huadquiña Hacienda where Justo Rodríguez refused to be measured and photographed, Nelson reported that "the administrator of the hacienda was the man who mustered Indians to be measured."<sup>80</sup> He did so on the orders of the hacienda owner, Señora Carmen, who befriended Bingham. In Cusco, on the other hand, Bingham's activities on July 5, 1912 included arranging for Nelson "to continue taking portraits and measurements of Indians. The Lieut. Sotomayor gets Indians and translates, Nelson measures and photographs and then gives the Indian [*sic*] a media. It takes from 40 minutes to 1.5 hr. to do the stunt."<sup>81</sup> According to Nelson, Lieutenant Sotomayor had been secured "through Mr. Bingham's influence with the prefect"<sup>82</sup> and spoke Quechua. He caught Indigenous men off the street and main square and brought them by force into the Hotel Central, where Nelson had a room for taking

<sup>80</sup> YPEP, Series III, 1912, Box 20, Folder 27, Journal of Luther T. Nelson, 11.

<sup>81</sup> YPEP, Series III, 1912, Box 19, Folder 15, Journal of Hiram Bingham, 6.

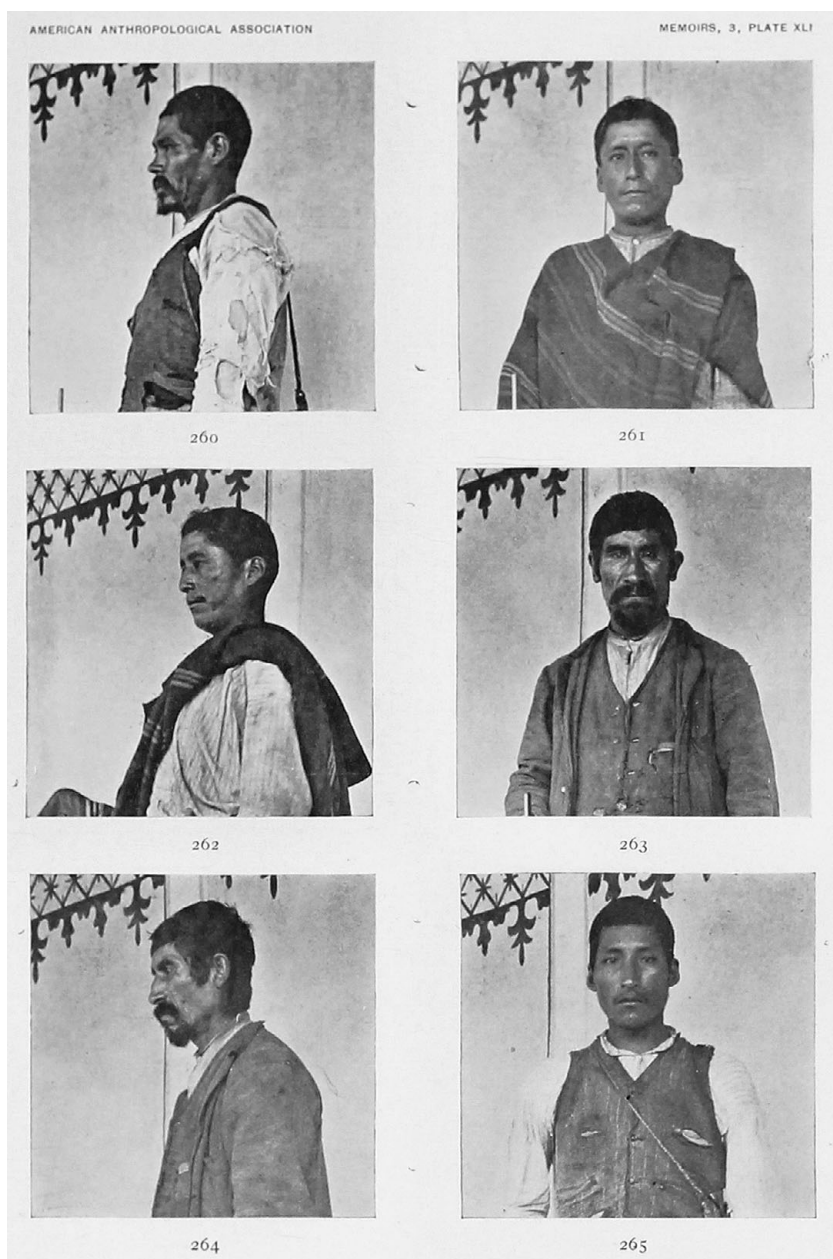
<sup>82</sup> YPEP, Series III, 1912, Box 20, Folder 27, Journal of Luther T. Nelson, 6.





**Figure 3.2** Anthropometric photographs 7–10, 12, and 14 by Luther T. Nelson, 1912  
 Source: National Library of Peru.





**Figure 3.3** Anthropometric photographs 260–265 by Luther T. Nelson, 1912

Source: National Library of Peru.



**Figure 3.4** Anthropometric photographs 28–32 and 34 by Luther T. Nelson, 1912  
 Source: National Library of Peru.

measurements and photographs. There, a local “man of leisure”<sup>83</sup> and friend of the expedition, Carlos Duque, assisted Nelson and translated with Sotomayor. Duque was the son of the owners of Santa Ana Hacienda mentioned previously, had spent time in the United States, and spoke English, Spanish, and Quechua.

To guarantee an adequate supply of subjects, Bingham had instructed the soldier to “arrest any Indians that seemed to be of pure blood and who proclaimed by their costumes and general appearance that they were typical Mountain Indians.”<sup>84</sup> Nelson noted the trauma some men experienced upon being detained unexpectedly, yet he was largely indifferent to it. He wrote that many captured in Cusco’s square feared they were being recruited for military service “and not a few shed tears at the thought.”<sup>85</sup> However, others “were only curious and much relieved when they were set free.”<sup>86</sup> He even conveyed the story of an Indigenous man the soldier had brought in who allegedly “took very kindly to the idea. Military honors appealed to him. The teniente answered his many questions in the quichua [*sic*] tongue, and, when the measurements were taken, told him to come back in a month to be enlisted.”<sup>87</sup> Suggesting a broader range of affective relations that may have shifted after the initial encounter and during the examination, Nelson claimed more generally that “The Indians are very fond of having their picture taken.”<sup>88</sup>

Indigenous people and others in the Cusco region were not strangers to photography by the early twentieth century, as Deborah Poole and Jorge Coronado have documented.<sup>89</sup> However, the extent of their previous experience, if any, in front of the camera varied and few would have recognized the surgeon’s measuring tools or his gaze. It is not surprising then, that Nelson’s assertion of fondness does not appear to correspond to other accounts of research subjects’ behavior or clues about their moral thinking. Descriptions suggest multiple ways of perceiving, engaging, and in many cases resisting, subverting, or co-opting the expedition’s racial scientific work. The predominant sentiment conveyed, however, is reluctance. In Cusco, few people expressed willingness to be measured and photographed without the threat of force. A reflection of the ubiquity of violence as a form of encounter, this behavior became especially evident on a day when the soldier was absent. Left

<sup>83</sup> Ibid.

<sup>84</sup> Bingham, “Wonderland,” 561.

<sup>85</sup> Nelson, quoted in Ferris, “The Indians of Cuzco and the Apurimac,” 61.

<sup>86</sup> Ibid.

<sup>87</sup> YPEP, Series IV, Box 26, Folder 27, Report of Luther T. Nelson, no page number. If Nelson’s identification of numbered negatives in the letter accompanying his report is correct, then this account corresponds to Lucio Tito from Pisac, in the province of Calca. Although Tito’s age is difficult to discern, he was likely too old for military service.

<sup>88</sup> YPEP, Series IV, Box 26, Folder 27, Report of Luther T. Nelson, no page number.

<sup>89</sup> Poole, *Vision, Race, and Modernity*; Coronado, *Portraits in the Andes*.

on their own, Nelson and Duque “tried to round up some Indians but found they would not come. We succeeded in getting only one, and that one by aid of a policeman.”<sup>90</sup> A similar phenomenon occurred at Huadquiña Hacienda, suggesting Rodríguez was not the only research subject there to refuse Nelson’s efforts. Nelson noted that while the hacienda administrator had been assigned to bring men to be photographed and measured, “He was occupied with other business nearly all the time, the result being that it was rather difficult for me to get an Indian promptly when I was ready for him.”<sup>91</sup> Conditions worsened, moreover, when the owner, Señora Carmen, departed for Cusco with her relatives, servants, and the administrator himself. Their absence “put a stop to measuring Indians,” indicating the centrality of coercion and threats of violence to the expedition’s research.<sup>92</sup>

In other cases, local officials came to Indigenous peoples’ defense, objecting to the intrusive and coercive nature of the expedition’s examination of reluctant subjects’ bodies. In Arequipa, for example, city officials soundly rejected Nelson’s efforts to set up a studio. Despite the expedition’s lobbying, officials saw the work of measuring and photographing Indigenous research subjects as invasive and an affront to decency and privacy. According to Nelson, the subprefect informed the expedition that “the sentiment of Arequipa was different from that in Cuzco to the extent that the people would resent any action compelling an Indian to submit to measurements.” Nelson also noted a further impediment to acquiring subjects, which was that “practically the only pure blooded Indians in Arequipa are those who come in for commercial purposes, driving their llama trains loaded with produce.”<sup>93</sup>

Having failed to perform research in Arequipa and instead provided medical and surgical care to notable residents and a member of the Duque family, Nelson lamented the challenges he faced there and in the Cusco region as anthropometric data collector. Reflecting Bingham’s and the expedition’s racist thinking and broader disdain for South Americans, he expressed frustration with local officials and a dismal view of Indigenous Andean peoples. While he praised their apparent eagerness at other moments, in these cases he invoked racial fitness categories prevalent at the time, disparaging them as backward and asserting that “the Indians [*sic*] are dull mentally. How much coca has to do with this condition is hard to determine.”<sup>94</sup> In other cases when traveling, he and others resorted to force to compel Indigenous people to obey

<sup>90</sup> YPEP, Series III, 1912, Box 20, Folder 27, Journal of Luther T. Nelson, 6.

<sup>91</sup> *Ibid.*, 11.

<sup>92</sup> *Ibid.*

<sup>93</sup> *Ibid.*, 8. References to Mestizo research subjects are largely absent from Nelson’s journal and report, though they appear in Ferris’s published study. In notebooks, Nelson lists them as likely possessing Spanish blood.

<sup>94</sup> YPEP, Series IV, Box 26, Folder 27, Report of Luther T. Nelson, no page number.

their instructions. For example, he lamented in the town of Arma that “We could not get any food from the Indians [*sic*] without using force, and then we would succeed in getting small amounts only.”<sup>95</sup> Accounts thus reflect Nelson’s and other members’ failure to exert influence over Indigenous people in various settings, despite the assistance and support of powerful figures in Cusqueño society.

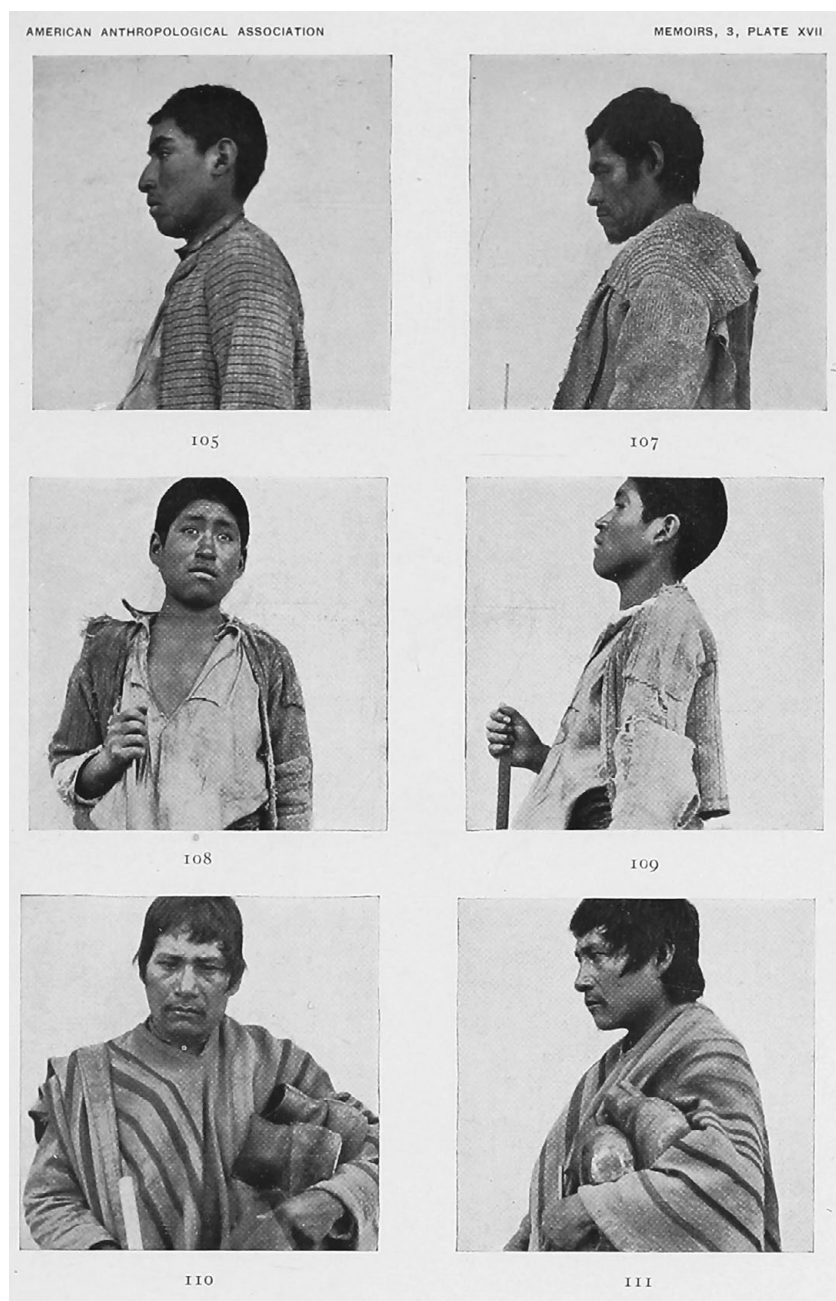
Photography itself proved especially provocative within these encounters. In at least one case, Indigenous people attacked expedition members and their camera equipment while they were traveling. Osgood Hardy wrote of encountering a group of Indigenous men who turned aggressive and specifically “laid violent hands on the tripod.”<sup>96</sup> Resistance is also evident among research subjects in Nelson’s anthropometric photographs. Rather than exhibit the emotionless, unfocused stares that typify the genre of standardized anthropometric portraits Bertillon had developed in France, and which Bingham expected Nelson to recreate, subjects frequently exhibited confusion, fear, and annoyance. They either focused directly on the camera or looked to the side when photographed head on (Figure 3.5). In some cases they appear to have refused to sit still. While the body remains in focus, the head appears blurred as if they moved to resist being photographed. Subjects’ shoulders, moreover, were often positioned with one higher than the other, rather than at equal levels. In some cases, men kept bundles strapped to their backs and hats on their heads, thus reducing the viewers’ ability to discern their physical form (Figure 3.6). In an ethnological picture of a woman, moreover, it appears that someone was positioned behind the subject, perhaps to hold her in place (Figure 3.7). In this way, research subjects’ behavior undermined Nelson’s work and its value as a comparative study of physiognomy and race; he could not exercise control fully in his improvised anthropometric studios.

These photographs’ most revealing aspect, however, is the way research subjects articulated desire, as theorized by Eve Tuck and K. Wayne Yang. This becomes evident in subjects’ use of a ruler to express their sense of self in the face of scientific practices that depicted them in a demeaning fashion. In anthropometric photography, the ruler should be positioned in exactly the same location and angle in every portrait. Likewise, the camera should be the same distance from every subject to make their portraits consistently measurable and comparable. In the Yale Peruvian Expedition photographs, however, research subjects held the upper portion or tip of a folding ruler (described in journals as a “folding rod”) in their hand, rather than having it placed alongside their head. Although Nelson wrote in one of his anthropometric notebooks that “In the photographs each subject holds a metre rule so

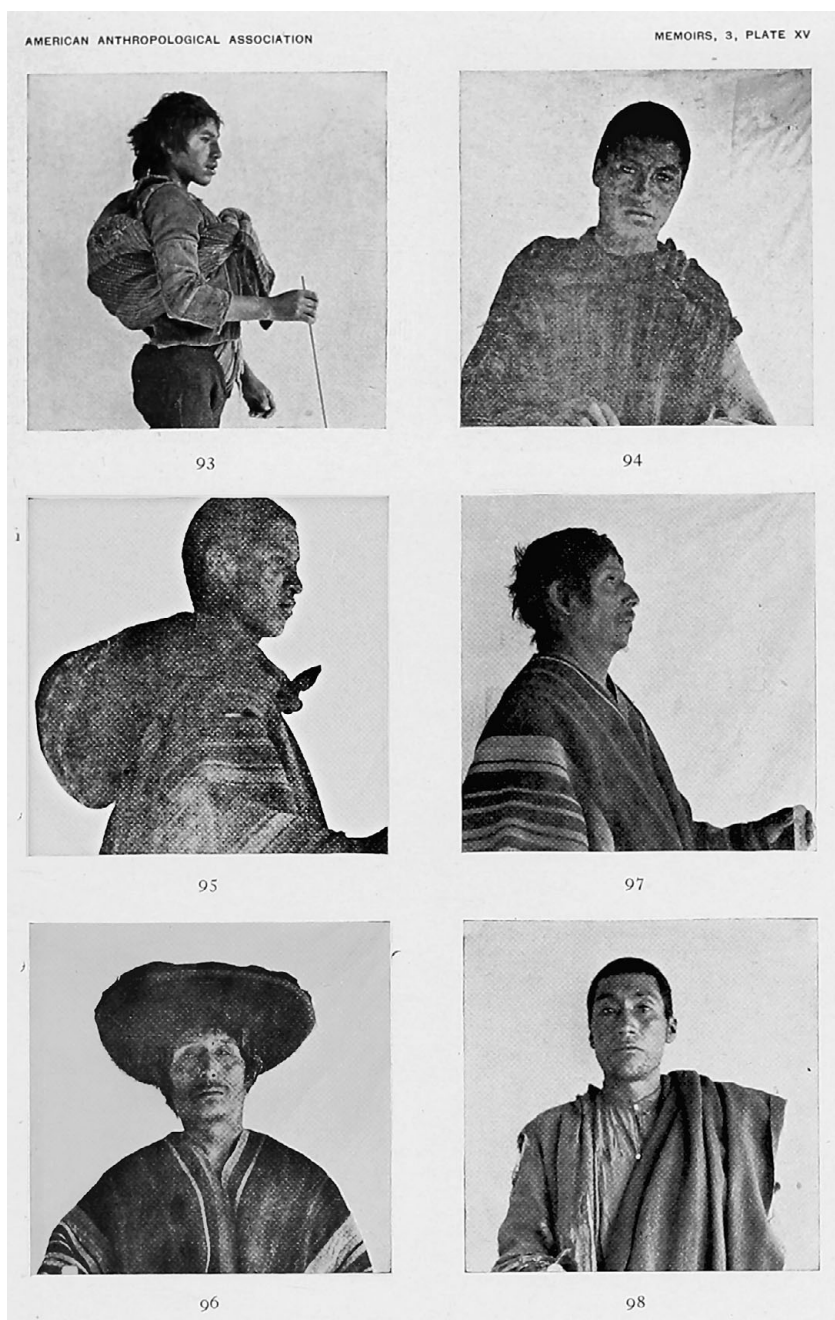
<sup>95</sup> YPEP, Series III, 1912, Box 20, Folder 27, Journal of Luther T. Nelson, 16.

<sup>96</sup> YPEP, Series III, 1912, Box 19, Folder 22, Record of Assistant Osgood Hardy, 18.





**Figure 3.5** Anthropometric photographs 105 and 107–111 by Luther T. Nelson, 1912.  
 Source: National Library of Peru.



**Figure 3.6** Anthropometric photographs 93–98 by Luther T. Nelson, 1912.

Source: National Library of Peru.





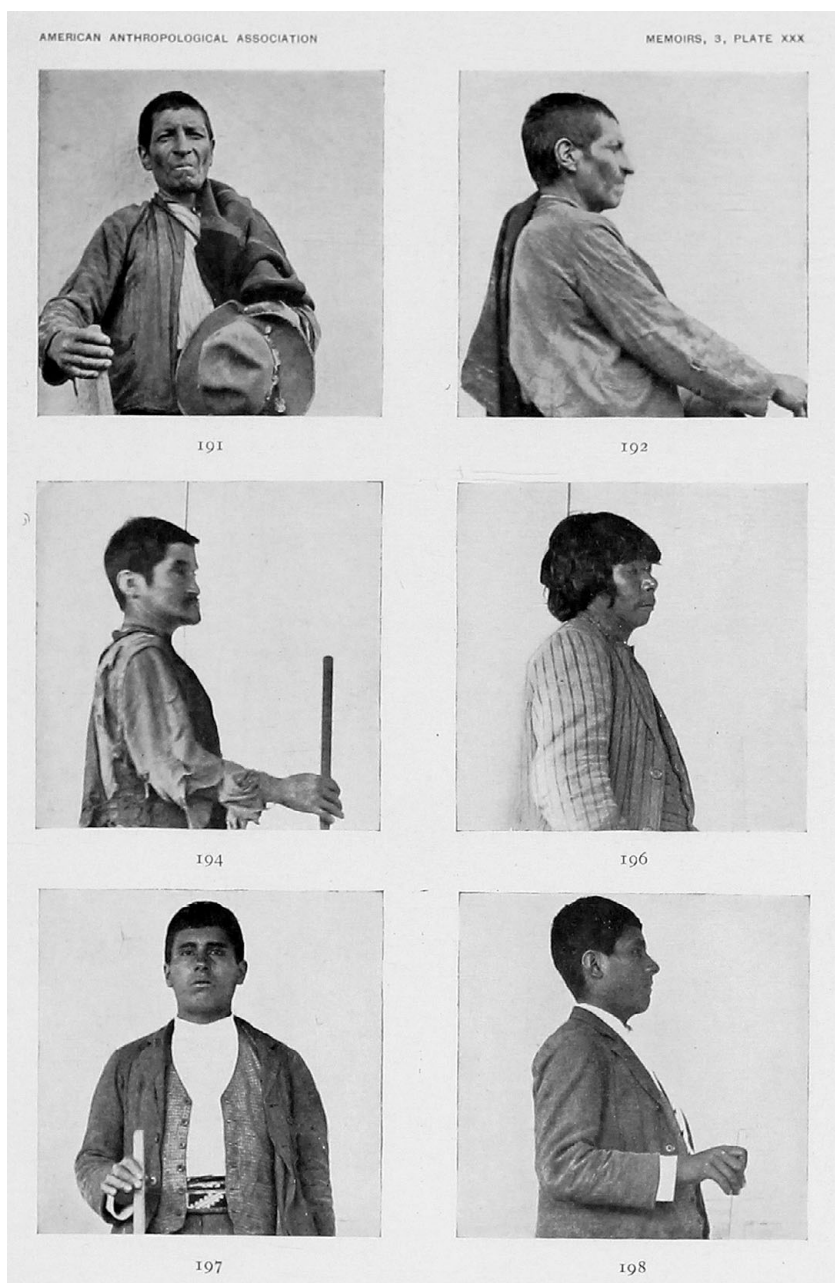
**Figure 3.7** Anthropometric photographs 269–271 by Luther T. Nelson, 1912.

Source: National Library of Peru.

as to give an idea of height of the individual,” the subjects he photographed positioned it at different angles and directions in their portraits, undermining its precision as an anthropometric tool.<sup>97</sup> Some held it directly outward in front of them at an angle, while others leaned it to the side and still others appeared to hold it upright or raise it off the ground (Figure 3.8). In some cases, moreover, they treated it like a cane, grasping it as if they would put weight on it or stabilize their balance with it when walking. In still other cases, they actually held it like a *vara*, a traditional ceremonial staff that officials in Andean communities used to connote authority<sup>98</sup> (Figure 3.9). Research subjects thus subverted the ruler’s function, adopting poses with it that consciously or subconsciously challenged expedition members’ authority and reflected their own sense of community, identity, and status. The ruler became little more than a gesture toward the expedition’s goals of “scientifically” depicting racial difference. Research subjects used it to assert power and

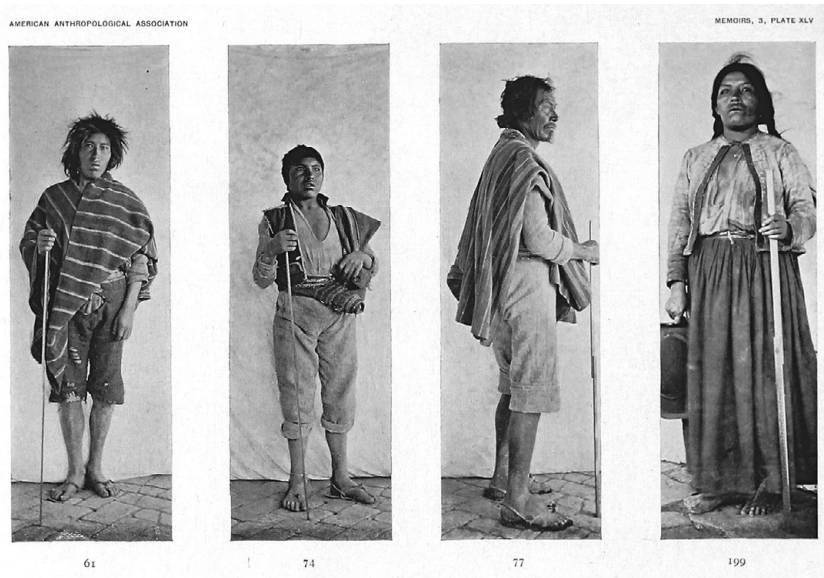
<sup>97</sup> YPEP, Series III, 1912, Box 20, Folder 28, Notebooks of Luther T. Nelson, no page number.

<sup>98</sup> Thanks to Kris Lane for making this observation when I presented an earlier version of this chapter.



**Figure 3.8** Anthropometric photographs 191–192, 194, and 196–198 by Luther T. Nelson, 1912.

*Source:* National Library of Peru.



**Figure 3.9** Anthropometric photographs 61, 74, 77, and 199, Luther T. Nelson, 1912.  
 Source: National Library of Peru.

fashion how they would be depicted in accordance with their desires and claims of local autonomy.

Finally, cases exist in which men appear to have gone to more extreme lengths to seize control of how they would be perceived in anthropometric photographs.<sup>99</sup> They, too, expressed what Tuck and Yang would describe as desire. For example, Bingham's "In the Wonderland of Peru" includes an account of an Indigenous man, who "when he found he could have his picture taken for free, dressed in his Sunday clothes. The next day he returned to the photograph. When he was shown the negative he refused to believe that it was his picture, because he could not see the colors and the spangles that decorated that Sunday coat he wore."<sup>100</sup> While Bingham no doubt included this story to entertain a US and global reading public and reinforce stereotypes of Indigenous unfamiliarity with photography, it can be

<sup>99</sup> The expedition's written records include no discussions of the one woman who was measured and appeared in an anthropometric photograph.

<sup>100</sup> Bingham, "Wonderland," 561. Nelson also mentions this account in the letter accompanying his medical report. If his identification of numbered negatives is correct, then this story corresponds to Mariano Larota, age twenty-seven, from the province of Canchis.

read differently. Much like the men who held the ruler as if it were a *vara*, this gentleman chose to co-opt the anthropometric photograph to make it a depiction of how he saw himself and wanted others to see him. He rejected the photograph's purpose as a demeaning, ostensibly "scientific" record of his physical form. The makeshift anthropometric studio thus became a site of negotiation and assertion of Indigenous identity and desire, in addition to being a site of attempted domination, coercion, violence, resistance, and refusal.

### Conclusion

Although photographs and written records provide valuable clues and insights, there remains much that the archive cannot tell us about the research subjects Nelson sought to measure and photograph. For example, we know little about Justo Rodríguez and his reasons for refusing to comply beyond the fragmentary descriptions included in anthropometric notebooks and published materials. Given where he and Nelson encountered one another, he likely worked as an hacienda peon. If true, then he bore witness to the Yale Peruvian Expedition's use of Huadquiña Hacienda as a base camp and stopping point, from which they organized their efforts to excavate Machu Picchu. He may even have joined the expedition's workforce, one of many hacienda workers whose contributions went unacknowledged. That said, he may equally likely have had little, if any, connection to the expedition, his behavior an act of refusal by someone suddenly and unexpectedly caught within its scientific gaze.

Rodríguez, however, was one of many research subjects who pushed back against Nelson's efforts through forms of resistance, refusal, and subversion. Others embraced or co-opted aspects of the project for their own ends. In the process, such figures acted not within a single moral field that was widely shared across Cusqueño society. Rather, they acted on the basis of the various positions they occupied within a complex, highly unequal, rural agrarian society marked by internal colonialism and undergoing rapid expansion and economic growth. Furthermore, their ways of knowing, perceiving, and judging likely engaged and exceeded the categories expedition members and their Peruvian scientific and intellectual counterparts employed in written accounts. In this sense, the concept of the moral field need expanding and complicating in order to include the experiences of ordinary people and explain their decisions. This is especially true for colonial contexts where transnational science has typically operated. In writing about those settings, historians must avoid reconstructing moral fields in the singular and only in reference to the circulation of widely shared ideas and beliefs. To do so without considering different epistemologies and political, social, and economic realities is to suggest that those people historians and others have traditionally identified as intellectuals act within moral fields, while others do not.

## Coda

How can this study of past scientific research encounters inform the present? Since 2000, two conflicts over scientific research have brought the Peruvian government, Indigenous communities, and other constituencies from the Cusco region into conflict with the institutions that sponsored the Yale Peruvian Expedition's research in the 1910s. First, under the governments of Alejandro Toledo and Alán García, tensions escalated between the Peruvian government and Yale University over the repatriation of artifacts and, to a lesser degree, human remains removed under Bingham's supervision. Efforts by Peru's First Lady, Eliane Karp, to draw attention to the dispute, lawsuits brought by the Peruvian government against Yale, and other factors resulted in Yale signing an agreement in November 2010 and transferring its Machu Picchu collection to Cusco in 2011. While doubts persist in Peru as to whether Yale returned all items, the collection now sits in a museum in Cusco along with tattered exhibition materials Yale provided.<sup>101</sup>

In 2011, a second conflict emerged between Indigenous peoples and a project organized by the National Geographic Society. As Kim TallBear describes, the community of Hatun Q'eros refused to cooperate with researchers from Genographic, a scientific project that sought samples of community members' DNA. Funded by the National Geographic Society, Genographic wanted this genetic material because the Q'eros claim to be descendants of the Incas and to lack Spanish admixture. Genographic's goal was to chart human populations' origins and development worldwide through modern genomics. In this sense, despite being led by scientists who framed their research from an antiracist stance, Genographic engaged questions of racial origins that had motivated the Yale Peruvian Expedition's work and Peruvian scientists like Lorena and Coello y Mesa a century earlier. Like Nelson, who meticulously recorded which research subjects appeared to be of racially "pure" Indigenous origins, Genographic pursued racial purity through science.<sup>102</sup>

The community of Hatun Q'eros refused Genographic scientists' requests for DNA samples and questioned how they engaged Indigenous communities. As reported in a communiqué, the Q'eros took this action based on concerns about the project's ethical dimensions, citing dubious methods employed to seek informed consent, questions about who owned or would have control over samples, questions about what the National Geographic Society might do with data, and doubts about the project's treatment of Indigenous knowledge. The communiqué outlined seven reasons for refusal

<sup>101</sup> Cox Hall summarizes these disputes in *Framing's* concluding chapter.

<sup>102</sup> TallBear, *Native American DNA*, 189–195.

that centered on ethics. Genographic ultimately suspended its project in the Cusco region.<sup>103</sup>

Comparing these recent conflicts and situating them in relation to the material in this chapter raises questions that complicate our understanding of moral thinking, the ethics of expedition science, and contemporary Indigenous rights and self-determination. Why has Peru's government struggled with Yale to repatriate artifacts and prioritized them over human remains while ignoring the possible return of reams of physiological data stored there? What, on the other hand, can be learned about the National Geographic Society by situating conflicts between the Q'eros and Genographic within a longer history of racial scientific research that it sponsored? By focusing on desire in this chapter and making the work available in translation, I hope this study of how past Indigenous and Mestizo research subjects resisted, refused, engaged, subverted, and co-opted racial scientific research can further inform Indigenous communities' already deep historical understandings of their relations with outside researchers.

<sup>103</sup> Ibid.; "Genographic Project Hunts the Last Incas: Resurrected 'Vampire' Project Brings Fears of Biopiracy to Cusco Region," *Andes Communiqué*, May 2011, [www.slideshare.net/BUENOBUNOGOOD/andes-communique-genographicprojecthuntstheLastIncas](http://www.slideshare.net/BUENOBUNOGOOD/andes-communique-genographicprojecthuntstheLastIncas).