
People in Motion:
Introduction to
Transnational Movements
and Transwar Connections
in the Anthropological
and Genetic Study of
Human Populations

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The essays in this special issue shed new light on the transnational movement and exchange of researchers, data, theories, and scientific objects in the anthropological and genetic study of human populations in the twentieth century. Historians have long stressed how the study of race and human populations in this period served to create a national identity for emerging nation states. More recently, historical narratives of anthropology and human genetics have emphasized the global scale of research networks in these sciences. This issue explores the specific routes, crossings, and interactions between national and international contexts prompted by the study of races and populations. The essays reveal not only how transnational scientific practices were strongly connected to national aspirations and projects, but also how unequal social and geopolitical power relations

enabled and obstructed the transnational movement of both people and scientific knowledge.

While we frequently invoke the global, the transnational, and the international together in this issue, we distinguish between these concepts following the general outline described by Sebastian Conrad (2016, pp. 44–8). In this framework, “international” refers more specifically to phenomena akin to international relations, i.e., diplomacy between countries, including formal multilateral scientific cooperation as well as professional organizations and conferences in which scientists frequently behaved as representatives of national scientific communities. In contrast, the “global” is a contested moving target for historians, but generally applies to forms of connected history that trace, for example, the exchange of commodities, ideas, or practices across long distances and different kinds of political entities, including empires and colonies as well as nation-states (see Poskett 2019). In this issue, we foreground “transnational” as a flexible term that incorporates internationalism (in the shape of international scientific organizations and conferences) while also enabling us to highlight particular features of scientific studies of human populations in the twentieth century. Engagement in such studies was never “limited to state actors and not bound by state borders,” and in fact required the movement of people, data, and equipment across nation-state boundaries; yet at the same time, these studies served to reinforce identity claims made by the nation-state (Conrad 2016, p. 45).

Transnationalism in anthropology and genetics raised fundamental disputes over disciplinary authority as well as the representation and independence of national scientific communities. The special issue highlights the manifold circumstances shaping transnational exchanges and stresses the deeply interdisciplinary nature of the study of human populations by reflecting on the practices of physical anthropologists, physicians, geneticists, biologists, physiologists, and state officials. The papers examine how these actors worked to leverage transnational entanglements to their advantage in a range of debates involving racial identity, colonization, national sovereignty, and scientific internationalism. A particular strength of the special issue is its geographical breadth, revealing the shared concerns of scientists from Portugal and Greece to India and Japan in projecting their authority at home and abroad, and comparing the distinctive strategies and gestures they developed to navigate both national and international pressures. Moreover, the unstable and contested nature of transnational collaborations between North America and Western Europe with Asia and the Eastern Mediterranean often provoked controversy and conflict, requiring personal negotiations and professional adaptations. The papers integrate archival research and oral histories to assess these historical collaborations and conflicts.

1. Historiographical Interventions

This issue aims to join in conversation important new developments in two historical subfields: transnational histories of modern science, and histories of racial science bridging physical anthropology and human genetics. We draw inspiration from two recent edited volumes: *How Knowledge Moves: Writing the Transnational History of Science and Technology* (Krige 2019) and *National Races: Transnational Power Struggles in the Sciences and Politics of Human Diversity, 1840–1945* (McMahon 2019). We link the innovations of these two volumes together through an expanded timescale that emphasizes the continuity of scientific networks and practices before, during, and after the Second World War, and situating the study of human classification, evolution, and heredity at the center of the broader question of how knowledge moves. Our reasoning for the latter is based on a commitment to recognizing human knowledge as always mediated through human bodies, and that knowledge in motion reflects people(s) in motion.¹ By focusing on anthropology and human genetics, we analyze this notion of moving embodied knowledge on two fronts: the human as a knower and as the thing to be known. We also adapt Nikolai Krementsov's observations about interwar genetics to argue that the inherent relationality of data used by physical anthropology and human heredity studies meant that the "very subject of these disciplines transcends national borders and [...] required continuous cooperation and constant exchange of data among scientists from different countries" (Krementsov 2005, p. 8).

At the same time, these sciences have a uniquely close relationship to discriminatory processes of imperialism, colonialism, and nation-building. An abundant literature traces how craniometry, anthropometry, serological genetics, and other scientific methodologies (including racialized medicine) have been deployed in the service of European imperialism and white settler colonial domination.² McMahon and the contributors to *National Races* emphasize that the transnational networks and classification practices of racial anthropology were key elements not only for establishing white supremacy in overseas colonies, but also for the historical development of nationalisms and racial hierarchies *within* Europe prior to World War II (McMahon 2019, pp. 18–20).³ Simultaneously, another strong thread of scholarship analyzes transnational networks of postwar human geneticists, whose approaches to studying human populations shared many practical

1. For an incisive critique of science studies frameworks that grant equal weight to humans and non-humans as actors in knowledge circulation, see Mukharji 2020, p. 530.

2. To cite only a few examples: Sysling 2016; Widmer and Lipphardt 2016; Effros 2017; Anderson 2006, 2020; Mak 2020; Seth 2018; Mukharji 2014.

3. See also Mattson 2014.

continuities with prewar anthropology.⁴ This special issue synthesizes these trends with contributions tracing not only transnational networks within Europe (the primary focus in *National Races*), but also transregional and transimperial circuits to Asia and North America. We therefore locate this issue among new works demonstrating that anticolonial nationalists beyond Europe not only embraced racial anthropology and genetics for their own political ends, but also shaped international understandings of racial difference and evolution (Wade et al. 2014; Suárez-Díaz 2017; Hyun 2019; Burton 2021). Indeed, several of the papers in this issue demonstrate that distinct scientific “modes of racialization” initiated under imperial and colonial governance intensified under nationalist rule, rather than fading away (see Anderson and Roque 2018).

Furthermore, we aim to challenge (as others have) the lingering tendency in transnational histories of science to treat separately the interwar period and the Cold War period, casting the Second World War as a watershed moment of equal importance both for scientific networks and practices and for global geopolitics. In contrast, the contributions in this issue that focus predominantly on the interwar and wartime periods in Norway, Greece, and the North Atlantic highlight unresolved issues about genetic expertise and credibility, anthropometric standardization, and the national belonging of refugees that continued well into the postwar era. Meanwhile, the papers focusing on the postwar period in Japan, India, and the Portuguese empire likewise show the enduring postwar prominence of anthropologists trained in the interwar period, demonstrating the need for more “transwar” histories of science as modeled by Miriam Kingsberg Kadia (2019). Although many politicians’ and bureaucrats’ careers may have ended in 1945, the same was not generally true for anthropologists and geneticists, regardless of their wartime political affiliations.

We therefore return to the notion of knowledge as embodied in individual people, whose career status shifted over time and space, and who therefore cannot be reduced to nodes and edges in abstract and static networks. As Krige contends, the transnational movement of scientific knowledge is best understood in terms of “social achievements,” in order to foreground “the contingency and the labor required for scientific and technological knowledge and ‘knowledgeable bodies’ ... to cross borders” (Krige 2019, p. 5). Such contingency and labor are never simply a matter of physical distance to be overcome by technologies of long-distance communication and transportation, but rather a feature of global structural

4. See especially Bangham and Chadarevian (eds.) “Heredity and the Study of Human Populations After 1945” (2014), as well as Reardon 2005; Lipphardt 2010; Radin 2017; Bangham 2020; Lindee and Santos 2012.

inequalities shaping the possibilities for participation in scientific research. Accordingly, Krige notes, we must “imagine networks as lumpy, three-dimensional structures made up of hierarchical interpersonal encounters” (Krige 2019, p. 9). Indeed, the encounters experienced by the historical actors in our contributions were not always cooperative: we witness many instances in which scientists of particular professional, national, and gender identities confronted disciplinary gatekeeping and bureaucratic red-tapism by others, who used such tactics to leverage their own situational power (which sometimes reinforced, and sometimes subverted, the geopolitical power structures in which these personal encounters took place). Finally, “networks are not rigid struts but dynamic relationships that evolve over time and that persist only as long as the networked participants reap some benefit from them” (Krige 2019, p. 9). This understanding of scientific networks as transactional and transitory, rather than inevitable and predictable pathways toward the advancement of knowledge, profoundly shape our analyses in the papers that follow.

2. Major Themes and Connections

Transnational anthropological collaborations were ostensibly about reconstructing a universal shared history of human evolution, but ultimately magnified human differences especially at the national level. These differences implicated not only the physical features of human bodies, but also the scientific techniques and apparatus used to measure them. International efforts to standardize anthropological measurement procedures sought to rectify local idiosyncrasies of practice, considering the incomparability of data to undermine the legitimacy of anthropometric research. Iris Clever’s work on British biometrician Miriam Tildesley uncovers how nationalist and sexist sentiments thwarted attempts to universalize measurement practices in the first half of the twentieth century. Even though many scientists supported the standardization of anthropometric data, they nevertheless defended their localized research practices from outside influences, such as the international standardization committee headed by Tildesley. Yet, as Clever reveals, the lack of standardization ultimately did not hinder the production and comparison of anthropometric data.

The reluctance of national scientific communities to significantly change their own practices to conform to an international standard brings into focus the powerful role of anthropological sciences in (re)building national identities in the twentieth century. Anthropological research defined the racial status not only of a nation’s population(s), but also that of its colonial subjects or others excluded from national belonging. Ageliki Lefkaditou shows how Greek anthropologist John Koumaris used racial blood group studies to integrate refugees from Asia Minor displaced by

the Greco-Turkish War (1919–1922) into the Greek nation. Motivated by domestic nationalist ambitions, Koumaris turned to the emerging international science of racial serology to demonstrate that mainland Greek people and the *Mikrasiates* together constituted a homogeneous Greek race. Lefkaditou further shows how Koumaris positioned himself as the central authority on serology in Greece and legitimized his scientific claims through membership in foreign organizations as well as through transnational exchanges of instruments, data, and publications.

These kinds of transnational engagements and collaborations bolstered anthropologists' political legitimacy within the nation; however, they did not guarantee domestic scientific authority. Jon Røyne Kyllingstad's paper explores competing claims to scientific authority in interwar Norway. Jon Alfred Mjøen, a respected figure in the international eugenics movement, found his overseas stature dismissed at home, where Norwegian geneticists of international repute dismissed his racial views as "pseudoscientific" and obstructed him from becoming a credible voice in scientific debates about heredity and eugenics within Norway. In response to Mjøen's international activities, his opponents founded the Norwegian Association for Heredity Research, which became the central scientific venue for Norwegian discussions about heredity. However, the Association never assumed the role of interlocutor between the international eugenics movement and interwar Norwegian heredity research.

In the second half of the twentieth century, as imperial states confronted pressures to accede to the self-determination of anticolonial nationalist movements, anthropologists trained in imperial contexts solidified their own nationalist commitments while clinging onto former colonial networks and territories. Ricardo Roque's paper explores how Portuguese racial anthropologists navigated international access to the colonial field sites that were foundational to their own research community. While denying foreign scientists access to these spaces, Portuguese scholars also increasingly became internationalist in their scientific activities, building connections with foreign scientists and international scientific organizations. Roque conceptualizes this tension as "transnational isolationism," or the desire and practice to "become transnational in their outlooks without giving the imperial nation away."

At the same time, transnational scientific networks of education and research enabled anticolonial nationalists to play an influential role in anthropological research. Thiago Pinto Barbosa's paper traces the transnational scientific trajectory of Indian anthropologist Irawati Karvé, showing how Karvé applied her race science training in Germany (based on German colonial skull collections from East Africa and New Guinea) to study human difference in decolonizing South Asia. Through Karvé, transnational

understandings of race were folded into Indian categories of difference, such as caste, tribe, and religion, and became wrapped up in debates around the emerging nation-state. This complex entanglement, Pinto Barbosa argues, helps us better understand both the political and scientific stakes of the ongoing racialization and essentialization of human difference, in India and beyond.

The issue concludes with Jaehwan Hyun's paper on postwar Japanese research on "hybrid children" (*konketsuji*) and miscegenation. Hyun shows how Japanese anthropologists developed a negative perspective on of racial mixing, stressing its biological harm in Japanese publications, but downplayed that language when presenting their work in an international context that disavowed such discourse. Indeed, they successfully integrated *konketsuji* anthropology into the International Biological Program Human Adaptability (IBP-HA) section, which required a "double play" between maintaining their racial anthropology program at home while at the same time becoming members of a new international scientific program. Hyun emphasizes that the postwar international trend of comparative racial studies of human growth rates, rather than the fields of population genetics or physical anthropology, enabled the continuity of racial research in Japan. This insight prompts our recommendation for further historical analyses of other branches of human biology—beyond the now well-trodden paths of medicine, genetics, and anthropology—to examine how racialized studies of human heredity not only survived but thrived after the Second World War.

Several overarching themes connect the geographically diverse papers in this issue. As Lindee and Santos (2012) point out, a broader range of national contexts provides a deeper understanding of the historical development of physical anthropology and genetics. The histories of Indian, Japanese, Greek, Portuguese, and Norwegian scientists brought together in this collection decenter a narrative that depicts entire countries (such as the United States) as scientific metropolises upon which "peripheral" national scientific communities depended for training, equipment, and recognition (McMahon 2019). Our papers shift the spotlight to specific, sometimes transitory sites that brought together people in motion, such as anthropological institutions and international conferences, where individual social encounters and travel conditions reveal the power dynamics of knowledge exchange at a finer grain than that of geopolitics. One such site was the Kaiser Wilhelm Institute of Anthropology, Human Heredity, and Eugenics in Berlin, where many Asian anthropologists (including Karvé) trained under the guidance of Eugen Fischer throughout the first half of the twentieth century. Fischer's Asian students learned to produce anthropological data using the German craniometry system and brought it back

to their own countries, where they adapted German methodologies for domestic anthropological goals. This globally dispersed production of racial data using German guidelines pushed British biometrician Tildesley to envision German anthropometry as the basis for international standardization in the interwar period. While German anthropology was fiercely criticized after World War II, German craniometry remained the core methodology of physical anthropology in India and Japan.

International scientific congresses were another site where scientists from research communities big and small solidified and transformed their scientific reputation. Here, scientists could bolster their domestic scientific authority, as the cases of Greek anthropologist Koumaris and Norwegian eugenicist Mjøen show. By participating in international events, they could claim validation of their research outcomes from scientifically more prestigious international colleagues. Yet these international engagements also required less-privileged scientists to pay for recognition. Through affiliation with the International Biological Program, Japanese anthropologists aimed to restore confidence that their scientific capabilities were worthy of the international research community. Entry into this community, however, was only possible after they matched their ways of talking about race to those of their American and European collaborators. It is unsurprising that the power dynamics involved in collaborations with members of more powerful scientific communities heightened feelings of professional vulnerability among anthropologists from Japan, Portugal, and Greece.

Questions of geopolitical power require scrutiny of the variable impacts of degenerating colonial networks on human heredity studies. Pinto Barbosa shows that the end of the British Raj allowed Indian anthropologists like Karvé to take the place of white colonial scientists and pursue population research for postcolonial nation-building. However, Karvé's training imprinted the legacies of multiple colonial contexts, including German imperialism in Africa, upon Indian postcolonial anthropology and its entanglements with racism and nationalist politics. Hyun's paper illuminates that the rearrangement of scientific networks happened concurrently with post-imperial nation-building in Japan. Due to the collapse of Japanese empire in 1945, Japanese anthropologists lost their colonial networks spanning from Manchuria to Micronesia, where they studied the "hybrid children" of Japanese colonizers and colonized Asians. New connections with American racial anthropologists compelled Japanese researchers to study postwar "hybrid children" produced by the US occupation: the children of American G.I. fathers and Japanese mothers. In contrast, Portuguese anthropologists kept a tight grip on colonial sites and people and maintained Portugal's imperial aspirations against the

postwar tide of postcolonial movements. Not only did the Portuguese preserve their access to colonial networks of field sites, human remains, and living people, they also restricted the ability of researchers of other nationalities to study the scientifically coveted “primitive” races of people in East Timor.

These examples show that power relations between scientifically more-privileged and less-privileged groups were not fixed but fluctuated in different contexts. By regulating field sites in East Timor and *konketsuji* orphans in Japan, Portuguese and Japanese anthropologists strategically controlled international access to “raw” human materials in exchange for international recognition that in turn empowered their scientific authority at home. The International Federation of Eugenic Organizations may have determined the research agenda of scientists in various countries but was only one voice in a broader societal conversation in Norway. American anthropology appeared as an isolated scientific outpost in discussions of international standardization.

The empirical cases examined in this issue also offer opportunities to further lines of investigation related to gender. The notable prominence of women in this issue, both as scientists and as research subjects, raises questions about whether physical anthropology and human genetics offered more professional opportunities for women than other contemporary scientific disciplines. Certainly, the intimate nature of anthropometric measurement meant that women were often recruited to measure female research subjects (see Burton 2021). De Chadarevian (this issue) suggests that the relatively lower scientific prestige of genetics and anthropology during the prewar period enabled more women to enter these fields. However, in many ways, the women scientists discussed by Clever, Kyllingstad, and Pinto Barbosa were exceptional in their social circumstances and access to supportive male mentors, accounting for their high degree of transnational recognition. Many other women who participated in anthropometric and genetic studies appear only in the acknowledgements of publications or are known primarily as half of a professional couple (such as the Hirszfelds, discussed by Lefkaditou). Paying attention to the intersectional identities of these women scientists will provide a deeper understanding not only of their influence upon anthropological methods and theories, but also of the historical development of human population studies across disciplinary boundaries.

International congresses and central institutions underscore how key issues and methods were shared across anthropological and genetic communities. While certain countries had a much larger voice in these transnational engagements than others, their power dynamics were not unilaterally forced onto smaller scientific communities. Furthermore,

methods, issues, theories, and data were transformed during these transnational encounters. Despite the uneven travel of skulls, blood samples, data, books, instruments, and people, in the study of human populations remained malleable and multifaceted as scientist around the world tried to detect biological difference between people in a century of great commotion and people in motion, when borders between nations and colonies were drawn and redrawn.

References

- Anderson, Warwick. 2006. *The Cultivation of Whiteness: Science, Health, and Racial Destiny in Australia*. Durham, NC: Duke University Press.
- Anderson, Warwick. 2020. “From Racial Types to Aboriginal Clines.” *Historical Studies in the Natural Sciences* 50 (5): 498–524. <https://doi.org/10.1525/hsns.2020.50.5.498>
- Anderson, Warwick, and Ricardo Roque. 2018. “Introduction: Imagined Laboratories: Colonial and National Racialisations in Island Southeast Asia.” *Journal of Southeast Asian Studies* 49 (3): 358–371. <https://doi.org/10.1017/S0022463418000309>
- Bangham, Jenny, and Soraya de Chadarevian, eds. 2014. “Heredity and the Study of Human Populations After 1945.” Special section in *Studies in History and Philosophy of Science Part C: Studies in History and Philosophy of Biological and Biomedical Sciences* 47, Part A: 45–190.
- Bangham, Jenny. 2020. *Blood Relations: Transfusion and the Making of Human Genetics*. Chicago: University of Chicago Press. <https://doi.org/10.7208/chicago/9780226740171.001.0001>
- Burton, Elise K. 2021. *Genetic Crossroads: The Middle East and the Science of Human Heredity*. Stanford, CA: Stanford University Press. <https://doi.org/10.1515/9781503614574>
- Conrad, Sebastian. 2016. *What Is Global History?* Princeton: Princeton University Press. <https://doi.org/10.2307/j.ctvc779r7>
- Effros, Bonnie. 2017. “Berber Genealogy and the Politics of Prehistoric Archaeology and Craniology in French Algeria (1860s–1880s).” *The British Journal for the History of Science* 50 (1): 61–81. <https://doi.org/10.1017/S0007087417000024>, PubMed: 28202101
- Hyun, Jaehwan. 2019. “Blood Purity and Scientific Independence: Blood Science and Postcolonial Struggles in Korea, 1926–1975.” *Science in Context* 32 (3): 239–260. <https://doi.org/10.1017/S0269889719000231>, PubMed: 31829298
- Kadia, Miriam Kingsberg. 2019. *Into the Field: Human Scientists of Transwar Japan*. Stanford, CA: Stanford University Press. <https://doi.org/10.1515/9781503610620>

- Krementsov, Nikolai L. 2005. *International Science between the World Wars: The Case of Genetics*. London: Routledge. <https://doi.org/10.4324/9780203005668>
- Krige, John, ed. 2019. *How Knowledge Moves: Writing the Transnational History of Science and Technology*. Chicago/London: University of Chicago Press. <https://doi.org/10.7208/chicago/9780226606040.001.0001>
- Lindee, Susan, and Ricardo Ventura Santos. 2012. "The Biological Anthropology of Living Human Populations: World Histories, National Styles, and International Networks: An Introduction to Supplement 5." *Current Anthropology* 53 (S5): S3–16. <https://doi.org/10.1086/663335>
- Lipphardt, Veronika. 2010. "The Jewish Community of Rome: An Isolated Population? Sampling Procedures and Bio-Historical Narratives in Genetic Analysis in the 1950s." *BioSocieties* 5 (3): 306–329. <https://doi.org/10.1057/biosoc.2010.16>
- Mak, Geertje. 2020. "A Colonial-Scientific Interface: The Construction, Viewing, and Circulation of Faces via a 1906 German Racial Atlas." *American Anthropologist* 122 (2): 327–341. <https://doi.org/10.1111/aman.13386>
- Mattson, Greggor. 2014. "Nation-State Science: Lappology and Sweden's Ethnoracial Purity." *Comparative Studies in Society and History* 56 (02): 320–350. <https://doi.org/10.1017/S0010417514000061>
- McMahon, Richard, ed. 2019. *National Races: Transnational Power Struggles in the Sciences and Politics of Human Diversity, 1840–1945*. Lincoln: University of Nebraska Press. <https://doi.org/10.2307/j.ctvjsf4cz>
- Mukharji, Projit Bihari. 2014. "From Serosocial to Sanguinary Identities: Caste, Transnational Race Science and the Shifting Metonymies of Blood Group B, India c. 1918–1960." *Indian Economic & Social History Review* 51 (2): 143–176. <https://doi.org/10.1177/0019464614525711>
- Mukharji, Projit Bihari. 2020. "Bloodworlds: A Hematology of the 1952 Indo-Australian Genetical Survey of the Chenchus." *Historical Studies in the Natural Sciences* 50 (5): 525–553. <https://doi.org/10.1525/hsns.2020.50.5.525>
- Poskett, James. 2019. *Materials of the Mind: Phrenology, Race, and the Global History of Science, 1815–1920*. Chicago: University of Chicago Press. <https://doi.org/10.7208/chicago/9780226626895.001.0001>
- Radin, Joanna. 2017. *Life on Ice: A History of New Uses for Cold Blood*. Chicago: University of Chicago Press. <https://doi.org/10.7208/chicago/9780226448244.001.0001>
- Reardon, Jenny. 2005. *Race to the Finish: Identity and Governance in an Age of Genomics*. Princeton: Princeton University Press.
- Seth, Suman. 2018. *Difference and Disease: Medicine, Race and the Eighteenth-Century British Empire*. New York: Cambridge University Press. <https://doi.org/10.1017/9781108289726>

- Suárez-Díaz, Edna. 2017. “Blood Diseases in the Backyard: Mexican ‘Indígenas’ as a Population of Cognition in the Mid-1960s.” *Perspectives on Science* 25 (5): 606–630. https://doi.org/10.1162/POSC_a_00253
- Sysling, Fenneke. 2016. *Racial Science and Human Diversity in Colonial Indonesia*. Singapore: National University of Singapore Press. <https://doi.org/10.2307/j.ctvr9hj794>
- Wade, Peter, Carlos López Beltrán, Eduardo Restrepo, and Ricardo Ventura Santos, eds. 2014. *Mestizo Genomics: Race Mixture, Nation, and Science in Latin America*. Durham, NC: Duke University Press. <https://doi.org/10.1515/9780822376729>
- Widmer, Alexandra, and Veronika Lipphardt, eds. 2016. *Health and Difference: Rendering Human Variation in Colonial Engagements*. New York: Berghahn Books. <https://doi.org/10.2307/j.ctvr695k8>