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SCIENCE WITHOUT BORDERS?

THE CONTESTED SCIENCE OF “RACE MIXING” CIRCA WORLD WAR II IN JAPAN, EAST ASIA, AND THE WEST

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In 1967, Mamiya Hiroshi of the Department of Internal Medicine at Tōhō University in Japan published a study of abnormal hemoglobin in the leading *Journal of the Japanese Society of Internal Medicine*. Since the discovery of hemoglobin—the molecule that transports oxygen in red blood cells—in 1949, scientists worldwide had identified over 120 forms of “abnormal” hemoglobin. Most of these varieties were harmless products of allelic variation in human gene pools, but some variants of hemoglobin, such as sickle cell, were potentially deadly. Mamiya devoted much of his paper to explicating methodologies for identifying serological abnormalities, with photographs, diagrams, and descriptions detailing electrophoresis tanks, spectrophotometers, globin fingerprints, and peptide maps. The most arresting aspect of Mamiya’s methodology, however, was not so much the technology as the philosophy he used to target, sort, and label human populations. In one group, Mamiya agglomerated people he described as “mixed-blood children” (*konketsuji*) with Japanese mothers and fathers who were “largely black Americans and white Americans; other than that, American Indian, Filipino, Russian, Indian and Korean are included.” In the opposing group, Mamiya gathered “our countrymen”—the Japanese—defined not in terms of citizenship but rather in terms of racial purity, which Japanese children with foreign fathers lacked.¹

Mamiya announced that he had discovered dangerous serological and genetic differences between “mixed-blood” and “pure” Japanese. “The author was not able to confirm even a single case of abnormal hemoglobin among our 3000 countrymen, but two cases of abnormal hemoglobin were confirmed among 179 *konketsuji*.” This amounted to a startlingly high rate of abnormality: 1.1 percent among *konketsuji*, in contrast to a mere 0.02 percent among “proper Japanese” (*honrai no Nihonjin*). For Mamiya, his findings were “proof that at this moment, genes that factor in abnormal hemoglobin are being introduced by *konketsuji* on an ongoing basis. On the grounds of our science of race hygiene [eugenics], this is a problem we cannot take lightly.” Neither of the *konketsuji* whose blood and genes Mamiya labeled “abnormal” suffered from any disease.² Regardless, Mamiya marked them as vessels of hereditary foreign contagion. In contrast, Mamiya concluded with pride that “with regard to hemoglobin, our country is truly pure.”³

In thus reifying “pure blood” and the biopolitical threat posed by “race mixing” in an otherwise “pure” nation, Mamiya was neither a scientific renegade nor relic of an *ancien régime* of race hygiene. On the contrary, the preference for “pure blood” was firmly established after World War II amid public and political uproar over *konketsuji* born to Japanese mothers and foreign soldiers and civilians stationed in Japan during the Allied occupation (1945–1952).⁴

Japan had embraced racial assimilation, mixing, and universalism at an earlier historical moment—the high imperial era of the 1910s through the early 1940s—when the United States was pursuing isolationism, segregation, and, much like Germany, white supremacy. The balance of scientific and political opinion shifted in both East and West circa the 1940s and 1950s, as the United States turned outward during World War II and the Cold War, while Japan turned inward and shed its universal aspirations. In parallel, postcolonial Korea asserted its biological and political uniqueness. After defeat in 1945, a shrunken Japan and liberated Korea embraced biopolitical particularism and “pure-blood” nationalism while the enlarged United States reimagined itself as the standard-bearer of universal values in a nominally color-blind but deeply color-ranked world empire.⁵ Had World War II ended differently, so too might the prevailing scientific stance on “race mixing” in the US, Japan, Germany, and Korea.

In researching and publicizing the scientific construct called *konketsuji*, scientific and medical professionals played a key but underappreciated role in constructing postimperial Japanese as a homogenous race and “pure-blood” nation. Mamiya was thus working well within local postwar scientific norms and desires when he claimed to have proved a genetic link between “blood mixing,” bodily pathology, and biopolitical menace. Yet this is not the impression one would get from otherwise illuminating studies by leading historians of Japan, who proclaim that doctrines of racial purity and the practice of race science receded in

postwar Japan amidst what Miriam Kingsberg Kadia terms “worldwide” reaction to “horrors . . . committed by Nazi Germany.”⁶ Similarly, Japan historian Laura Hein asserts that the “post-fascist generation” repudiated “the discredited fascist fantasy” of Japanese purity.⁷ Scholars who make such claims generally offer little or no evidence to substantiate them.⁸ In the absence of evidence, what explains scholarly consensus on this point?

Historians of Japan appear to have imported as fact an assumption made by Western historians of science that scientific norms of racial “purity” peaked worldwide circa the 1930s, only to be repudiated worldwide in light of Nazi atrocities. Trauma, horror, and what historians of science Diane Paul and William Provine term “revulsion” provide the motive for mid-twentieth-century scientific actors to become anti-racist activists in this master narrative of moral and scientific progress.⁹ For example, Elazar Barkan’s classic study of “the retreat of scientific racism” opens by declaring that the “Nazi regime has compelled us all to recognize the lethal potential of the concept of race and . . . led to the decline and repudiation of scientific racism.”¹⁰ Similarly, Saul Dubow asserts that “the Nazi Holocaust . . . alerted humanity as a whole to the terrifying consequences of politicized racism.”¹¹ But who is this “humanity as a whole,” this “all of us”? Western scholars have too quickly elided the constituency of their universal human “we.” In these studies, evidence for the bold proposition of a global revolution against scientific racism is in fact drawn from the activities of scientists working predominantly in English in a small corner of the world known as “the West.” Étienne Balibar affirms that French scholars, too, redefined themselves as enlightened adversaries of the racism of their German rivals.¹² On examination, then, this apparently borderless narrative turns out to be a provincial narrative about US, British, and French victors in World War II, who took it upon themselves not only to destroy the Nazi regime but also to dismantle the scientific basis for that rival regime’s legitimacy as an instance and architect of racial purity. Implicit in many such studies is the assumption that non-Western actors, such as Asians, were not studying and defining “race” on their own terms.

In fact, in most of the world, scientists had concerns that differed from debunking or distancing themselves from Nazis. Pioneering historians of science Jaehwan Hyun, Hoi-eun Kim, and Projit Bihari Mukharji have recently explored how physical anthropologists, serologists, and geneticists in Korea and India have practiced race science in ways that both co-opt and contradict the presumed Euro-American hegemony over the sciences. The Asian history of science confounds established narratives of a mid-twentieth-century scientific revolution against racial purity centered on the Nazi eruption into history and the French-Anglo-American suppression of that eruption on behalf of a world assumed to be cheering from the sidelines. In India, scientific investigations of racialized castes and Aryan

supremacy showed no sign of abating after World War II.¹³ Meanwhile, in East Asia, the rise and fall of the Japanese empire proved more salient than that of the Third Reich in setting scientific, political, and moral agendas.

In Japan and Korea, doctrines of racial purity and the conviction that “mixed-race” populations were inferior or even dangerous were marginalized in the early twentieth century. After Japan annexed Korea in 1910, the weight of scholarly and journalistic opinion in Japan swung decisively toward the notion that the Japanese were a constitutionally “mixed-blood” people with a world-historical gift for assimilating diverse “races” into a harmonious imperial whole.¹⁴ During World War II, even proud Koreans such Yi Kwang-su and Yi Yōng-gūn took Japanese names—Kayama Mitsurō and Ueda Tatsuo, respectively—and collaborated with Japan’s government-general to promote “mixed-blood” identity and “mixed-blood” imperialism. Kayama and Ueda celebrated the “mixed” bloodlines of Japanese and Koreans as the organic basis for a heterogeneous but unified empire. And like many wartime Japanese, they promoted further “blood mixing” to fuse freshly conquered or conquerable peoples into the imperial family-state.¹⁵

It was only *after* World War II that doctrines of “pure blood” emerged as the scientific mainstream in Japan and Korea. Upon defeat, Japan suddenly lost diverse territories ranging from Korea to New Guinea, Taiwan to Sakhalin. The imperial orthodoxy that the Japanese were a “mixed-blood” people with a world-historical gift for fusing heterogeneous “races” into a harmonious whole abruptly lost most of the geopolitical evidence in its favor. In Korea, thirty-five years of Japanese occupation (1910–1945) were followed by division between North and South and internationalized civil war (1950–1953). In this context, nationalist scientists and politicians in both North and South promoted Korean “pure blood” to stake a biological claim to the unity and independence that proved out of reach geopolitically.¹⁶ Just as Korean nationalists reacted against Japan’s “mixed-blood” empire with appeals to “pure blood,” so too did many Japanese after their empire collapsed and new sources of unity, identity, and pride were sorely needed. Although some Japanese scholars in the wake of defeat stuck to their old pro-“mixing” position, they swiftly lost influence to proponents of a “pure-blood” Japan which had never assimilated foreign elements and probably never should.¹⁷

In the postwar era, Japanese scientists energetically produced new evidence in favor of racial “purity” by chronicling the alleged abnormalities of *konketsuji* and making them a foil against which to construct “pure” Japanese. The term *konketsuji* could denote any offspring born of interracial or international sex, concepts that overlapped or fused given that race and nation were captured by the single term *minzoku*. However, in postwar Japan, the *konketsuji* of primary interest were those born to Japanese mothers by fathers in Western, primarily American, military uniforms. These “mixed-blood” children were identified racially with the foreign

father rather than the native mother, fusing “pure blood” with patrilineal ideology. Thus *konketsuji* were routinely labeled either white or Black, but not Japanese. In other words, “mixed-blood” children were defined in popular and scientific discourse as *foreign* children rather than as Japanese children with diverse ancestry. Even the diversity of their fathers’ ancestry was oversimplified to fit a black-white dichotomy, as if there were no other races or mixes of races overseas. The notion that “mixed” children did not belong in Japan was most literally expressed in the 1950s in frequent calls by politicians and pundits on both the right and left that *konketsuji* be deported *en masse* to live with people of “their own race.” Generally, this meant sending *konketsuji* to the United States, but in an ambiguous triumph of “racial” over national thinking, Black *konketsuji* were also dispatched to Brazil.¹⁸ Less crucial to Japanese activists than what happened overseas was what happened in Japan, the bodies displaced and ideologies ingrained as the “mixed” child’s bonds with his Japanese mother and motherland were denied, along with the child’s potential racial bond with other Japanese.¹⁹ The postwar era saw the rise of a belief system that its Japanese critics dub a “myth of racial homogeneity.”²⁰ Japanese scientists played a prominent but little acknowledged role in constructing pure-blood “Japaneseness” and the innate “foreignness” of racialized minorities, including *konketsuji*, as nonpartisan, immutable, natural facts.

Chief among these scientists was Koya Yoshio (1890–1974), wartime bureaucrat in the Ministry of Welfare and postwar director of Japan’s National Institute of Public Health. In the high imperial era of expansion and assimilation, Koya was among an embattled minority who had decried “blood mixing.”²¹ In the postimperial era, he found peers and the public more receptive to his argument. At the Allied occupation’s end in 1952, Japanese presses and politicians fulminated that two hundred thousand *konketsuji* had been sired and abandoned by foreign soldiers in Japan. In reality, government surveys turned up only three to five thousand “occupation babies,” few of them orphans.²² Nonetheless, outrage over “blood mixing” gave Koya an opportunity to bring eugenic arguments against “blood mixing” to a broad audience.

Ladies’ Review (*Fujin kōron*) was a leading magazine catering to Japanese women with an interest in international affairs, fashion, and culture. For Koya, there was no audience more in need of counseling about the perils of planting Western seeds in Japanese soil. At occupation’s end, *Ladies’ Review* printed a stream of articles about the undesirable consequences of sex with foreign, particularly American, men. One cautioned that *konketsuji* were inclined to criminality.²³ Several warned that *konketsuji* were fated to misery in Japan and should be transported overseas to live among “members of their race.”²⁴ By the time Koya published his article in 1953, readers of *Ladies’ Review* were thus accustomed to being lectured about the inherently risky nature of interracial sex and family

formation. Even so, Koya stands out for extreme fearmongering. Koya warned that if adequate countermeasures were not soon taken, “mixed-blood” children would someday unite into a revolutionary caste that would rise up to slaughter the Japanese “race.” If this threat of genocide were not enough, Koya offered additional warnings against “blood mixing,” particularly with Black foreigners. For even if the “sociological” problems leading to race war could somehow be solved, such *konketusji* would remain, according to Koya, genetically unfit by natural law.²⁵

To ensure his anti-“blood mixing” message reached a wide audience, Koya delivered it not only in *Ladies’ Review* but also in speeches delivered across Japan. In this peregrinating public health crusade, Koya was joined by public intellectual and professor of medicine Nagai Hisomu (1876–1957), cofounder in 1930 of the Japan Race Hygiene Association (RHA), of which Koya was vice president.²⁶ The RHA, in addition to placing members and followers in government posts, hospitals, universities, and eugenic marriage counseling centers throughout Japan, also functioned as a lobbyist and hub for research and the popularization of race hygiene. Scholars have explored the RHA and the careers of Nagai and Koya in some detail.²⁷ Yet there has been virtually no mention of their postwar crusade to forestall “blood mixing.”²⁸

It was precisely to address this threat that Nagai and Koya took to innumerable stages in their nationwide tour at the end of the Allied occupation.²⁹ Nagai had long been a proponent of eugenic marriage, collaborating with leading feminists like Ichikawa Fusae and Katō Shizue in the Japan Society for the Promotion of Eugenic Marriage, founded in 1935.³⁰ In 1934, Nagai had published a *Handbook on Marriage* replete with eugenic instruction on mate selection and hygienic reproduction. So popular was his handbook that it went through seven editions, the last published posthumously in 1960, and Nagai spun off additional handbooks as well.³¹ Yet despite his leading role, in the 1930s, in promoting an explicitly German and Hitlerian model of race hygiene for Japan, Nagai’s eugenic texts and marital handbooks in that era made little to no mention of “blood mixing” or racial “purity.”³² Not until defeat and occupation would Nagai begin to emphasize the innate inferiority of *konketsuji* and the threat they posed to the Japanese “race.” For Nagai, as for many of his contemporaries, this newly awoken horror of *konketsuji* was entangled with humiliation and resentment at defeat and governance by foreign men. Of particular salience for Nagai, Koya, and many others was their disgust at the postwar sexual liberation—or debasement—of Japanese women, and their parallel disgust at the widespread, weak-kneed embrace of liberal, American values and American men that millions of Japanese had so recently fought to the death to resist.

In his 1949 *New Handbook on Marriage*, Nagai foretold that if “blood mixing” continued without regard for race hygiene, “there will be no alternative but for

the entire *minzoku* to fall into the fate of ruin.”³³ Lest anyone doubt, in *The Fate of the Race: I Appeal to the People of Japan*, Nagai explained that *minzoku* “carries a biological meaning, namely, a group of people bound by blood . . . who bear the genetic stock of the same ancestors.”³⁴ From start to finish, this book emphasized the postwar threat of racial extinction and hope of racial revival. “Beloved 70 million countrymen of Japan! Fellow countrymen who endlessly love Japan, who love the Japanese race, who wish from their hearts for the rebirth of New Japan. The poisoned cup overhangs our lips!”³⁵ Such were the book’s final words, driving home the urgency of its lengthy call to enforce race hygiene. Only thus could “the *minzoku* gain ultimate victory” in an international battle for survival, which, the text made clear, however severe Japan’s setback in 1945, had not been lost altogether.³⁶ In short, “we keenly feel that race hygiene simply must be the foundation of long-term plans for rebuilding the nation.”³⁷ From his position of scientific authority as former dean of the medical faculty at Tokyo University, Nagai endorsed the political principle, radical in its rejection of recent imperial projects yet increasingly mainstream in postwar Japan, that of all possible forms of government, “the most suitable situation is one *minzoku* to one state.”³⁸ Obviously “blood mixing” imperiled this ideal.

Historian Aiko Takeuchi-Demirci argues that after the catastrophe of World War II, many experts and laymen in Japan considered eugenic marriage to be imperative to “save the Japanese from racial extinction.” Thus, periodicals like *Iden* (*Heredity*), *Seikatsu kagaku* (*Science of Living*), and *Shufu to seikatsu* (*Housewife and Lifestyle*) published prolifically on the topic of eugenic marriage in the late 1940s and 1950s.³⁹ In 1949, amidst this mass-mediated eugenic-marriage boom, Nagai Hisomu published a *New Handbook on Marriage* that counseled readers to “gladly sacrifice the small self for the sake of a great ideal,” namely, “the eternal flourishing of the *minzoku* [race].” In an extended discussion of “Marriage with a Different Race (Blood-Mixing),” Nagai advanced many reasons to eschew such unions, including “disturbing social problems that will occur due to blood-mixing,” “national self-respect,” and genetics. “We must be aware that numerous undesirable sorts may proliferate as a result of blood-mixing.” Thirteen years prior in the imperial era, Nagai had described *konketsuji* as intermediate types, noting of “race mixing” in the United States that “the intelligence of black *konketsuji* is on the whole superior to pure black people and inferior to pure white people.”⁴⁰ Needless to say, this estimate endorsed anti-Black racism, but Nagai did not intend it as an argument against race-mixing. By contrast, in the postwar era, Nagai recanted his view of *konketsuji* as intermediate types, informing readers instead that “the abilities of mixed-blood children of white and black people . . . are by and large inferior even to pure blacks.”⁴¹ In short, there was no upside to “blood mixing.” *Konketsuji* were generally the worst of the worst, undesirable and inassimilable. Whether of white or Black paternity, Korean or Filipino, *konketsuji* born in Japan

would tend toward genetic inferiority. Contrary to the false promises of the now dismantled and discredited Japanese empire, no amount of assimilation and intermarriage could overcome inborn divisions of blood between *minzoku*. On the contrary, Nagai warned, intermarriage debased all “races.”

Chief among those who sought out and published empirical evidence of genetic inferiority among *konketsuji* in the early postwar era was Ishiwara Fusao (1883–1974), vice-director of the Microbial Institute at Nihon University. At the end of the Allied occupation in 1952 and for almost twenty years thereafter, Ishiwara published numerous studies demonstrating and explaining “mixed-blood” inferiority in leading scholarly journals including *Heredity*, the *Journal of Anthropology*, and *Race Hygiene*.⁴² Ishiwara and his colleagues frequently cited Western scholars—above all, American and German geneticists and eugenicists Charles Davenport and Eugen Fischer—in discussions of “blood mixing,” but no expert was more often cited in Japan than Ishiwara himself. However, the research that secured Ishiwara’s postwar prominence was not his first foray into studying *konketsuji*. In 1941, his first paper on the topic expressed effusive praise for the positive effects of racial hybridization. The “hybrids” in Ishiwara’s 1941 study were products of Japanese and Chinese “mixture” growing up in Tokyo. As Japan struggled to conquer and absorb China, Ishiwara found Japanese-Chinese *konketsuji* to be healthier, fatter, and taller than other children growing up in the same Japanese environment. Ideal physical specimens, these *konketsuji* also excelled at schoolwork and possessed appealing personalities.⁴³ In short, Ishiwara raised no alarms about “blood mixing” in the heyday of empire. However, upon defeat in 1945, Ishiwara lost interest in Japanese-Chinese hybrids and began instead decades of research on white-Japanese and Black-Japanese hybrids, about whom he rarely found anything positive to say.

As a microbial expert, Ishiwara expressed deep interest in physical maladies among postwar *konketsuji*, diagnosing them with high rates of hemophilia, abdominal hernia, and skin diseases, as well as impaired intelligence and sociability and outright idiocy. He summed up his conclusions in the journal *Heredity* as follows. “In consanguineous marriages, genetic ties are too close, and in *konketsuji* genetic ties are too distant. In these cases, the skin and mucous membrane lose their powers of resistance [to disease].” Ishiwara concluded his analysis by expounding on Hitler’s philosophy of “Land and Blut.” In the wake of six years of occupation by sexually active foreign soldiers, Ishiwara mused, “There is a subtle psychological order to national territory and national blood. Blood mixing shakes this order.”⁴⁴ Ishiwara’s attempts to prove and protect this blood-based “order” went on for decades. His opinions are of particular import because Ishiwara led a team of researchers investigating *konketsuji* under the auspices of the Ministry of Welfare’s Institute for Research on Population Problems. In 1954,

his team published a one-hundred-page report entitled *Anthropometric Influences of Emigration and Blood Mixture on Japanese Race* [sic], in which the notion of genetic disorders caused by “blood mixing” feature prominently.⁴⁵

Ishiwara’s conversion from pro- to anti-“mixing” corresponds to a general *tenkō* (“ideological reversal”) in Japan. During the war, *konketsuji* were born of imperial expansion and celebrated as such; after the war, they were rejected as the illegitimate offspring of defeat and postwar decadence. Postwar animus toward *konketsuji* targeted those sired by enemy forces above all, but all *konketsuji* were polluted by association. Banished from speech and even memory was the positive valence once attached to “mixtures” such as Japanese-Chinese or Japanese-Korean. At the occupation’s end, Koreans in Japan were stripped of their citizenship and were removed from Japan *en masse*, along with mixed Korean-Japanese families, to dark and uncertain fates in North Korea.⁴⁶ The early postwar era was an era of low-violence ethnic cleansing. From this era’s deliberate and coercive sorting of populations by “blood” and “race,” the nonoverlapping and “homogenous” nations of Japan and Korea were born.

How can we situate Japanese and East Asian race hygiene in the transnational history of science? In the last ten to fifteen years, a new wave of scholars has challenged the once canonical narrative of race science’s mid-century decline in the West, chronicling the ways in which it continued to be practiced in fields like genetics and biomedicine into the twenty-first century. Yet for all the critical insights they offer, such revisionists in some respects replicate the master narrative they set out to critique, leaning heavily on Nazi impacts and Anglophone protagonists to explicate trends in “science” *tout court*. Michael Yudell, for example, asserts that mid-twentieth-century population geneticists preserved “race” for science by divorcing it from “the fallacy of the eugenic proposition” amidst “a worldwide reaction to Nazi eugenical horrors.”⁴⁷ Yet despite repeatedly invoking “worldwide” trends, Yudell does not pause his Anglocentric tale to evidence worldwide reaction. Nor is this skipped step unusual in a field that *sotto voce* asks us to embrace an implicitly diffusionist model whereby “the rest” cannot help but follow where the Anglophone “West” and its scientists lead.

Michelle Brattain is among the few to account for the general omission of non-Western scientists from the mid-century history of race science. In her article on the 1950s UNESCO Statements on Race—often brandished as evidence of global scientific thought, despite their overwhelmingly Western European and American authorship—Brattain asserts that there were no scientific experts outside the West capable of weighing in on race at the time.⁴⁸ The claim has the distinct virtue of being easily falsified. More difficult to refute are abstract, agentless arguments verging on teleology, as when sociologist Jenny Reardon asserts that “theories of race that underwrote Nazi racial hygiene declined in science once the legitimacy

of the Nazi regime had been undermined.”⁴⁹ The fact that the “scientists” and “science” under study are distinctly Anglophone is rhetorically smoothed away in favor of science without borders.

Redefining the mid-century decline of race hygiene as local rather than global, Anglophone and French rather than absolute, is more faithful to the evidence. Language communities, contingent identities, national and imperial histories, and what historian Hiromi Mizuno terms “scientific nationalism” matter a good deal more to the history and future of science than is allowed by accounts of science without borders.⁵⁰ Ironically, given their anti-racist ethos, dominant scholarly narratives of the mid-century decline of race hygiene and scientific endorsements of racial “purity” have come to function as yet another installment in the epic march of progress and modernity in which the West takes center stage and plays the leading role. In reality, neither before nor after the mid-century turning point identified with Nazism and its suppression did German, Japanese, Korean, or Anglophone sciences represent “worldwide” or “real” science because science is a diverse human practice embedded in particular human worlds and worldviews.

Postwar Japanese and Korean uses of “race hygiene” fit the European pattern only if we abandon presumptions of globally synchronous scientific “progress” and look instead for common ground in an asynchronous time: the wasteland of Europe after World War I, where eugenicists offered their scientific expertise “as a solution to the crises facing their countries after the war.”⁵¹ Europeans and East Asians who lost their political and emotional maps of the world after the fall, respectively, of the Austro-Hungarian and Russian empires in 1917 and 1918 and the Japanese empire in 1945, equally turned to the modern sciences of race to map their identities and that of their neighbors anew: who they were and where they belonged, to which government, nation, history, and future.

Suffice it to say, then, that sciences are not univocal. Their findings are not foretold but decided by human actors in human time. That human agency and identity are central to the practice of science may seem so obvious as to not merit stating. Yet false universals continue to obscure our view of science and its practitioners. This essay proposes an anti-racist methodological turn toward a global study of science that seeks not only to decenter the West but also to notice and explain variations across time and space without recourse to hierarchy, teleology, elision, or aporia. We must attend to how diverse scientists are unevenly situated in a global field of knowledge production by relating science to power and the local to the global, and by recognizing that the local is everywhere.

In a global field, it may be entirely coherent for scientists on opposite ends of the earth—or opposite ends of war and occupation—to move in opposing directions at the same moment, amassing evidence and authority for competing scientific paradigms. This parting of scientific ways is exactly what happened

with the sciences of identity and heredity—race science, genetics, eugenics, and anthropology—in the mid-twentieth century. Further research, including that done in Asian Studies, will no doubt yield further examples of this nonlinear, contested, global development of the sciences.

Notes

¹ Mamiya, “Ijō kesshokuso,” 29.

² Mamiya, “Ijō kesshokuso,” 29, 35–37.

³ Mamiya, “Ijō kesshokuso,” 36.

⁴ Kanō, “Konketsuji’ mondai”; Roebuck, “Orphans”; and Shimoji, “*Konketsu*,” 61–133.

⁵ Sakai, “Imperial Nationalism.”

⁶ Hein, “Art of Persuasion,” 748; Morris-Suzuki, “Ethnic Engineering,” 523–524; Kowner, “Race,” 92, 100; and Kadia, *Into the Field*, 94.

⁷ Hein, *Post-Fascist Japan*, 181.

⁸ Of these historians, only Kingsberg adduces evidence to support her claim, but that evidence is perfunctory.

⁹ Paul, “Eugenics,” 589; and Provine, “Geneticists,” 796. See also Stepan, *Idea of Race*, 172–173; Farber, *Mixing Races*; and Kühl, *For the Betterment*, 105–106.

¹⁰ Barkan, *Retreat*, 1. See also Barkan, “Race,” 693–707; and Proctor, “Three Roots,” 221.

¹¹ Dubow, *Scientific Racism*, 1.

¹² Balibar, “Racism,” 1632–1634.

¹³ Mukharji, “Serosocial to Sanguinary” and “Bengali Pharaoh.”

¹⁴ Oguma, *Genealogy*.

¹⁵ See e.g., Ueda, *Sumera Chōsen*; Oguma, *Self-Images*, 213; Park, “Yi Kwang-su,” 179; Ijichi, “Kōateki konketsuron”; and Nanba, “Minzokuteki yūgō.”

¹⁶ Hyun, “Blood Purity” and “Racializing *Chōsenjin*”; Kim, “Reauthenticating Race”; and Shin, *Ethnic Nationalism*.

¹⁷ Nanta, “Physical Anthropology,” 38; and Oguma, *Genealogy*.

¹⁸ Roebuck, “Orphans.”

¹⁹ Postwar Japanese discourse on *konketsuji* rigidly linked race/gender roles, such that the possibility, for example, that an American woman might bear a Japanese man’s baby was rarely acknowledged.

²⁰ Kanō, “Konketsuji’ mondai”; and Oguma, *Genealogy*.

²¹ See e.g., Koya, *Kokudo*, 120–32.

²² Roebuck, “Orphans,” 1, 8.

²³ Sawada et al, “Keredomo konketsuji,” 50.

²⁴ Nishi, “Konketsuji,” 53; see also Matsushita, “Konketsuji,” 78; and Uemura, “Ridgeway,” 38.

²⁵ Koya, "Konketsu."

²⁶ "Kiken," 5.

²⁷ See e.g., Chung, *Struggle for National Survival*, 88–96, 143–156; Katō, "Ren'ai kekkon," 179–188, 206–210; Oguma, *Genealogy*, 216–233; Suzuki, *Nihon*, 93–97, 144–168; and Yokoyama, *Nihon*, 153–271.

²⁸ Sakano discusses Koya's opposition to "blood mixing" but does not mention Nagai or the RHA in "Konketsu to tekiō," 188–215.

²⁹ "Kiken."

³⁰ Katō, "Ren'ai kekkon"; and Otsubo, "Engendering Eugenics," 244.

³¹ Nagai, *Daini kekkon*; *Kekkon dokuhon*; and *Shin kekkon*.

³² See Nagai, *Kekkon dokuhon* (1939); and *Yūseigaku gairon*.

³³ Nagai, *Shin kekkon*, 320.

³⁴ Nagai, *Minzoku*, 13.

³⁵ *Ibid.*, 101.

³⁶ *Ibid.*, 82.

³⁷ *Ibid.*, 5.

³⁸ *Ibid.*, 13.

³⁹ Takeuchi-Demirci, *Contraceptive Diplomacy*, 164–67.

⁴⁰ Nagai, *Yūseigaku gairon*, 209.

⁴¹ Nagai, *Shin kekkon*, 263, 317–323.

⁴² See e.g. Ishiwara, "Konketsuji no kenkyū"; "Konketsuji no kenkyū (I)"; and "Konketsuji no chinō"

⁴³ Ishiwara, "Nikka konketsu," 162–65.

⁴⁴ Ishiwara, "Konketsuji no kenkyū (I)," 28–29.

⁴⁵ Ministry of Welfare, *Konketsu*.

⁴⁶ Morris-Suzuki, *Exodus*.

⁴⁷ Yudell, *Race*, 8.

⁴⁸ Brattain, "Race."

⁴⁹ Reardon, *Race*, 18; and Roberts, *Fatal Invention*, 47.

⁵⁰ Mizuno, *Science for the Empire*.

⁵¹ Turda, *Modernism*, 122; and Turda and Weindling, eds., "Blood and Homeland."

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