Open Conversations: Diversifying the Discipline or Disciplining Diversity?

A Roundtable Discussion on Collecting Demographics Data

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GUIDE TO THE OPEN CONVERSATIONS FORMAT: MYRNA PEREZ SHELDON

The Open Conversations section is a new format for *Isis*. "Diversifying the Discipline or Disciplining Diversity?" is a conversation among seven scholars that has been edited by Projit Mukharji and myself, with some of our own thoughts contributed to frame and introduce the various themes and threads that emerged in these exchanges. Each contributor was asked to respond to a set of questions about a proposed plan from the Editorial Board of *Isis* to collect demographic information about those who submit articles to the journal. After the initial round, the contributors were all asked to respond to at least two other pieces in a follow-up reflection. Projit and I then wove all these together into this set of exchanges. These are our seven contributors:

Elise K. Burton, Junior Research Fellow at Newnham College at the University of Cambridge, will soon be joining the University of Toronto as Assistant Professor of Science and Technology Studies. Her work looks at how nationalism and genetics constantly and dynamically recombined in the twentieth-century Middle East, particularly in Turkey, Iran, and the Levant, thereby fashioning an evolving palette of raced identities.[1]

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[1] Elise K. Burton, "Red Crescents: Race, Genetics, and Sickle Cell Disease in the Middle East," *Isis*, 2019, *110*:250–269; Burton, "Narrating Ethnicity and Diversity in Middle Eastern National Genome Projects," *Social Studies of Science*, 2018, *48*:762–786, https://doi.org/10.1177/0306312718804888; and Burton, "'Essential Collaborators': Locating Middle Eastern Geneticists in the

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Sebastián Gil-Riaño is Assistant Professor of History and Sociology of Science at the University of Pennsylvania. He has a Ph.D. from the University of Toronto and held a prestigious postdoctoral fellowship in Race and Ethnicity in the Global South at the University of Sydney. Gil-Riaño researches the histories of race and developmentalism, focusing particularly on the histories of "anti-racism" within transnational organizations like UNESCO.[2]

Terence Keel is an associate professor at the University of California, Los Angeles, jointly appointed in the Department of African American Studies and the Institute for Society and Genetics. He is the author of a monograph exploring the Christian inheritance of racial science, as well as several articles.[3] Keel's scholarship has pioneered a unique set of insights that connect central problems in religious studies, the history of science, and black studies.

Emily Klancher Merchant is Assistant Professor of Science and Technology Studies at the University of California, Davis. She obtained her Ph.D. in history, along with a graduate certificate in science and technology studies, from the University of Michigan. She has published widely in journals such as *Social Science History*, *Journal of Policy History*, and *Population and Development Review*.[4] Her work explores the history of demography, digital history, and race.

Wangui Muigai is an assistant professor jointly appointed in the Department of History and the Department of African and African American Studies at Brandeis University. She earned her Ph.D. in history of science from Princeton University and thereafter held the Florence Levy Kay Postdoctoral Fellowship in Race, Science, and Society at Brandeis. Her research ranges across the history of health, with particular attention to how race, gender, and age shape illness experiences and health practices.[5]

Projit Bihari Mukharji is an associate professor in the Department of History and Sociology of Science at the University of Pennsylvania. He was educated at the University of Calcutta and the Jawaharlal Nehru University in India before obtaining his Ph.D. in history from the University of London. Trained within the Subaltern Studies tradition of history writing, Mukharji explores the intersections between the histories of science and the histories of subalternity in South Asia. He has published two monographs, three coedited books, and several articles.[6]

Global Scientific Infrastructure, 1950s–70s," *Comparative Studies in Society and History*, 2018, *60*:119–149. Her first book is *Genetic Crossroads: The Middle East and the Science of Human Heredity* (Stanford, Calif.: Stanford Univ. Press, forthcoming).

[2] Sebastián Gil-Riaño, "Relocating Anti-Racist Science: The 1950 UNESCO Statement on Race and Economic Development in the Global South," *British Journal for the History of Science*, 2018, *51*:281–303; Gil-Riaño, "Focus Review Essay: Redemptive Ancestries: Human Population Genetics, Sex, and Antiracism," *Social History of Medicine*, 2017, *30*:448–454; and Gil-Riaño and Sarah Tracy, "Developing Constipation: Dietary Fibre, Western Disease, and Industrial Carbohydrates," *Global Food History*, 2016, 2:179–209.

[3] Terence D. Keel, *Divine Variations: How Christian Thought Became Racial Science* (Stanford, Calif.: Stanford Univ. Press, 2018); Keel, "Religion, Polygenism, and the Early Science of Human Origins," *History of the Human Sciences*, 2013, *26* (2):3–32; and Keel, "Charles V. Roman and the Spectre of Polygenism in Progressive Era Public Health Research," *Soc. Hist. Med.*, 2015, *28*:742–766.

[4] Emily Klancher Merchant, "A Digital History of Anglophone Demography and Global Population Control, 1915–1984," *Population and Development Review*, 2017, *43*:83–117, https://www.doi.org/10.1111/padr.12044; Brian Gratton and Merchant, "*La Raza*: Mexicans in the United States Census," *Journal of Policy History*, 2016, *28*:537–567, https://doi.org/10.1017/S0898030616000257; Gratton and Merchant, "An Immigrant's Tale: The Mexican-American Southwest, 1850 to 1950," *Social Science History*, 2015, 39:521–550; and Gratton and Merchant, "Immigration, Repatriation, Deportation: The Mexican-Origin Population in the United States, 1920–1950," *International Migration Review*, 2013, *47*:944–975.

[5] Wangui Muigai, "'Something Wasn't Clean': Black Midwifery, Birth, and Postwar Medical Education in *All My Babies*," *Bulletin of the History of Medicine*, 2019, 93:82–113; and Muigai, Felix Rietmann, Mareika Schildmann, Caroline Arni, Daniel T. Cook, Davide Giuriato, and Novina Gohlsdorf, "Knowledge of Childhood: Materiality, Text, and the History of Science—An Interdisciplinary Round Table Discussion," *Brit. J. Hist. Sci.*, 2017, *50*:111–141.

[6] Projit Bihari Mukharji, *Nationalizing the Body: The Medical Market, Print, and Daktari Medicine* (London: Anthem, 2009); Mukharji, *Doctoring Traditions: Ayurveda, Small Technologies, and Braided Sciences* (Chicago: Univ. Chicago Press, 2016); David Hardiman and Mukharji, eds., *Medical Marginality in South Asia: Situating Subaltern Therapeutics* (Abingdon: Routledge,

Ahmed Ragab is the Richard T. Watson Associate Professor of Science and Religion at Harvard University. He earned his M.D. at Cairo University and his Ph.D. in history of science at the École Pratique des Hautes Études in Paris. Ragab's research engages with the histories of medicine, sexuality, and science from the medieval to the modern period in the Middle East. He is the author of six books and numerous articles.[7]

Suman Seth is Marie Underhill Noll Professor of the History of Science in the Department of Science and Technology Studies at Cornell University and the Coeditor of *Osiris*. He obtained his bachelor's degree in physics from the University of Sydney and his Ph.D. in history of science from Princeton. Seth has authored two monographs and several articles. His research covers the history of modern physical sciences, medicine, and race in Europe, America, and the British Empire. He has also been among those seeking to develop a sustained conversation between the history of science and postcolonial theory.[8]

Myrna Perez Sheldon is Assistant Professor of Gender and American Religion with joint appointments in the Department of Classics and the Department of World Religions, as well as the Women's, Gender, and Sexuality Studies Program, at Ohio University. She is a historian of evolutionary theory, a feminist theorist, and a scholar of religion. Sheldon earned her B.S. in biology from Westmont College and subsequently obtained a Ph.D. from Harvard University. Before joining Ohio University, she was a postdoctoral fellow at the Center for the Study of Women, Gender, and Sexuality at Rice University. She has published articles examining the history of evolution and race and sexuality, as well as work on evolution, religion, and feminism.[9]

What follows is an open-ended conversation. The structure meanders and doubles back on itself, anticipates points that land later, and—like any animated conversation—sometimes skips past insights, only to return to them again. This structure reflects the intellectual orientation of the conversation itself. Rather than offering prescriptive models for the challenging work of justice in the academy, these scholars invite us into a set of reflections on demographic data collection framed by their historical research. Even as we conclude the conversation, our intent is to open up new possibilities about where to take these insights in the future work of *Isis* and the History of Science Society.

INTRODUCTION: SHELDON

Why does it matter if the history of science is diverse? Or, rather, why should it matter if the people who tell the history of science represent a diversity of backgrounds, whether of class, race,

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2012); and Anne Digby, Waltraud Ernst, and Mukharji, eds., *Crossing Colonial Historiographies: Histories of Colonial and Indigenous Medicines in Transnational Perspective* (Newcastle upon Tyne: Cambridge Scholars, 2010).

[7] Ahmed Ragab, *Aḥmad ibn Khalaf al-Murādī's "Kitāb al-Asrār fī Natā'ij al-Afkār": The Book of Secrets in the Results of Ideas* (Doha: Leonardo, 2009); Ragab, *The Medieval Islamic Hospital: Medicine, Religion, and Charity* (Cambridge: Cambridge Univ. Press, 2015); Ragab, *Piety and Patienthood in Medieval Islam* (London: Routledge, 2018); Ragab, *Medicine and Religion in the Life of an Ottoman Sheikh* (London: Routledge, 2019); Ragab and Katharine Park, *Communities of Knowledge: Science in Medieval Europe and Islamdom* (Princeton, N.J.: Princeton Univ. Press, forthcoming); and Ragab, *Around the Clock: Time in Medieval Islamic Clinical Cultures* (Baltimore: Johns Hopkins Univ. Press, forthcoming).

[8] Suman Seth, "Putting Knowledge in Its Place: Science, Colonialism, and the Postcolonial," *Postcolonial Studies*, 2009, *12*:373–388; Seth, *Crafting the Quantum: Arnold Sommerfeld and the Practice of Theory, 1890–1926* (Cambridge, Mass.: MIT Press, 2010); and Seth, *Difference and Disease: Medicine, Race, and the Eighteenth-Century British Empire* (Cambridge: Cambridge Univ. Press, 2018).

[9] Myrna Perez Sheldon, "Breeding Mixed-Race Women for Profit and Pleasure," *American Quarterly*, 2019, *71*:741–765; Sheldon, "Wild at Heart: How Sociobiology and Evolutionary Psychology Helped Influence the Construction of Heterosexual Masculinity in American Evangelicalism," *Signs: Journal of Women in Culture and Society*, 2017, *42*:977–998; and Sheldon, "Claiming Darwin: Stephen Jay Gould in Contests over Evolutionary Orthodoxy and Public Perception, 1977–2002," *Studies in History and Philosophy of Science, Part C: Studies in History and Philosophy of Biological and Biomedical Sciences*, 2014, *45*:139–147.

sexuality, nationality, religion, or gender? It is possible to imagine a utilitarian answer to these questions. If our Society is charged with fostering interest in the history of science and its social and cultural relations, it is sensible to think that a greater diversity of perspectives would enable more holistic and comprehensive histories. There are very few now in our discipline who would argue that science happened only in the West, however defined, and even fewer who would contend that none but professional male intellectuals have created scientific knowledge. And hardly anyone would say, at least in public, that some races are incapable of scientific work. This better state of affairs has not come about because of the inevitability of generational liberalizing or the march of enlightenment. It has been achieved through the persistent and courageous work of previous generations of scholars in our field, by those who were willing to risk professional and personal security in order patiently to read archives against the grain so as to tell stories of working-class botanists, feminist anatomists, or fugitive race empiricists. The result has been richer and more imaginative histories of science.

But telling better histories cannot be the sole reason we care about and work for a more diverse professional History of Science Society. Doing that would frame history as a thing for itself, with its own transcendent needs and logics that supersede actual people in the world. When we work for history we commit the grave hypocrisy of ignoring the lessons we ourselves have learned from writing the history of those who have committed harm to further the aims of science. If we act in the name of history, the better world we seek is always a promise on the horizon, so perfect and pure that we are justified in ignoring, silencing, and rejecting those whom we might instead seek community with in the present. To be sure, real structural change is painful. How can we face the notion that by doing what we love we have hurt others? How can we believe that the research we pour our lives into has contributed to colonialism, racism, and sexism? The temptation is to reject these accusations as mistaken and the accusers as themselves incompetent—anything to reassure ourselves that our histories are fine as they are.

I am the daughter of a Filipino immigrant and a white American. As I grew up on the U.S.–Mexico border in San Diego with the last name Perez, most people in my life have inferred from these details and my appearance that I'm Mexican American; regardless of this inaccuracy, no one has ever thought that I'm white. In the assurance of my nonwhiteness, I have not dwelled enough on my own complicity in racism; my categorization by the U.S. Census tends to cast me as a victim, not a perpetrator, in these logics. But my assumptions were challenged recently when I attended the 2019 annual meeting of the American Studies Association in Honolulu. The ASA is a majority nonwhite conference, and despite (or because of) this the conference provoked difficult conversations about the role of the ASA and its members in the colonial relationship between the United States and Kānaka Maoli. Several indigenous scholars expressed their discomfort with ASA attendees treating their time in Hawaii as an entitled vacation. One scholar on Twitter described their deep discomfort at those "who claim to do activist or . . . justice oriented scholarship" but who nevertheless "uncritically enjoy tourism here, the industry most directly tied to Hawaiian dispossession."[10] Another scholar explicitly highlighted "POC scholars," saying that they were not excused from their involvement in these practices.[11] Reading these tweets as I was in Hawaii, attending the conference while also enjoying time at the beach with my family in off moments, I was brought up short. I had not really considered the role that my conference attendance played in ongoing colonialism in Hawaii. And I am ashamed at my

[10] Quoted with permission from @oiwi_scholar, 2019. "I've never been so deeply uncomfortable as an Indigenous scholar as I am here at #ASA2019 watching people who claim to do activist or at least somewhat justice oriented scholarship so uncritically enjoy tourism here, the industry most directly tied to Hawaiian dispossession." 10 Nov. 2019, 3:40 a.m., https://twitter.com/oiwi_scholar/status/1193448220380123137.

[11] Chanda Prescod-Weinstein @ibjiyoungi.

immediate reaction, which was a desire to explain away or downplay these criticisms so that my actions in the service of my own research could be excused from contributing to a history of settler violence.

Different bodies bring with them different intuitions; experiences of sexism birthed feminist epistemology; the realities of the postcolonial state opened up the idea of decolonizing. The gift of critical epistemologies is the ability for others to be trained in these intuitions: because of queer theory, straight people can have an expanded understanding of love and sex; because of critical race theory, those who have become white in the West can gain some insight into the legacy of the legal architectures of blackness. Through their ASA tweets, these scholars helped me to see the limitations of my own experience of race, one informed by whiteness and immigration, not indigeneity. These "training(s) of the imagination," as Gayatri Spivak terms them, are, at their best, not appropriations of the stories and identities of others.[12] Rather, they are a rigorous exercise in the cultivation of empathy.

I believe we should care about diversity in the history of science in order that our scholarship might be a force in the work of justice. The rise of ethnonationalism in the United States and Europe has given new and powerful life to right-wing attacks on the authority of science. Climate-change denial, anti-vaxx activism, and, of course, creationism have been features of Euro-American life for decades. But it has only been recently that the stark misogyny, white supremacy, and anti-LGBTQ bigotry that thread through these anti-science movements have made themselves unmistakable. In the face of this terror, many science advocates have argued that now is not the time to criticize science. We challenged science because we were assured of its power; now that the world is post-truth and full of alternative facts, surely we have gone too far. But what we have to say is too important for us to be afraid to speak. Cultivating a historical consciousness about science creates at least the possibility that it can be a source of healing and wonder instead of a remarkably efficient means of oppression. This is something we are uniquely capable of doing, and we must do it.

This Open Conversations section was conceived as an opportunity to use our particular expertise and special insight *as historians of science* to address the ethically and logistically complex work of justice in the academy. It came out of conversations between the current Editors of *Isis*, Alix Hui and Matthew Lavine, and the newly created Diversity and Inclusion Committee of the History of Science Society, co-chaired by Donald Opitz and me. In the midst of bureaucratic conversations regarding the creation of a new demographic statistics collection system for submissions to the journal, it suddenly dawned on us that we, of all people, should have some better insight into the epistemologies that undergird such practices. We have real insight into both the potentials and the precarities of collecting demographic information. Why not bring together our knowledge and experience and try to gain some wisdom in addressing this problem? That it took us some time to realize that this was desirable and even necessary is not actually surprising. Despite our commitment to studying how scientific knowledge emerges from social practices and networks, we are slow to recognize the role of such institutions in our own knowledge creation. There is an urgency to do something—or at least to be seen as doing something—about diversity. Something is better than nothing, surely. Yet we forget the lessons of our own histories that very often something is much worse than nothing.

And so we decided to take a breath and ask these contributors to weigh in on a set of questions: Can the act of *post hoc* collection of demographic data make our discipline more diverse? Can we survey our way to cultural change? How can our knowledge about the history of the measurement of bodies, race, intelligence, and the like inform how we think about measuring the bodies

[12] Gayatri Spivak, *Readings* (London: Seagull, 2014), p. 6.

of our own membership? What resulted is this set of forthright reflections on the serious problems with demographic data collection. These scholars have offered us wisdom gained through their historical research, cautioning us against a naive embrace of corporate diversity paradigms and an uncritical use of historical census categories. But they also provide us with a set of hopeful insights and signposts, not the least of which, as Terence Keel points out, is the demographic composition of this Open Conversations section. Such a collection of identities and epistemologies would have been unimaginable at the founding of HSS in 1924. But I would suggest that in our hope for the future we should not relax into an assurance of the rightness of our own intent and actions. If we are to be stewards of a more diverse history of science, let it be with humility and generosity, so that we might approach this difficult work with openness and a willingness to listen.

One of the thorniest aspects of the conversations over demographic data collection for *Isis* was the issue of race and ethnicity categories. Despite the fraught history of U.S. Census categories (as highlighted later in this conversation by Sebastián Gil-Riaño and Emily Merchant), these are the options that U.S.-based academics gravitate toward when constructing demographic surveys. To omit race and ethnicity from the survey would seem to imply that these are parameters that the Editors are unconcerned with. But it is almost impossible to imagine an adequate set of categories to capture the multitude of national, ethnic, and racial identities in the membership of an international academic society. To deepen our understanding of the interplay between raced experience and the collection of racialized data, we are fortunate to have the insights of Terence Keel and Wangui Muigai.

TERENCE KEEL

We've been asked in this exchange if the collection of data about the scholars who submit work to this flagship journal can make our field more diverse. Can a survey engender cultural change among historians of science? As someone who studies the creation of human difference in the life sciences, I am inclined to say that data alone does not compel change. What creates change is asking different questions, which typically happens when interested parties begin to examine the inheritance that shapes the ideas and theories at their disposal. For example, when the geneticist Rebecca Cann began to ask questions about the matrilineal descent of mitochondrial DNA (mtDNA) in the late 1980s, she—along with her mentor Allan Wilson and her colleague Mark Stoneking—brought an end to searching for the origins of anatomically modern humans in Europe and Asia. Meeting expectant mothers in Lamaze classes and gaining consent to study their placentas after delivery, Cann was able to rewind the molecular clock of human history and recover a small group of East African women who lived roughly two hundred thousand years ago. From these women, Cann, Stoneking, and Wilson claimed, all humans derive their mtDNA.[13] They helped rewrite the story of human evolution by asking the rather simple but powerful question, What does human history look like if you center the biology of women? At its best, our field is not interested in merely telling stories about science as much as it is concerned with developing a *historical consciousness* about science and the uniquely social, political, and cultural conditions that create it. We could say that our role is to unearth the values, ideas, beliefs, and structural determinants of scientific research that are otherwise hidden and, in some cases, willfully ignored. This goes beyond capturing science in the terms that our researchers might recognize themselves; it involves the hope that a historical consciousness might inspire an awareness of the limits and virtues

[13] Rebecca L. Cann, Mark Stoneking, and Allan C. Wilson, "Mitochondrial DNA and Human Evolution," *Nature*, 1987, 325:31–36. See also Alasdair Wilkins, "The Scientists behind Mitochondrial Eve Tell Us about the 'Lucky Mother' Who Changed Human Evolution Forever," *Gizmodo*, 27 Jan. 2012, https://io9.gizmodo.com/the-scientists-behind-mitochondrial-eve-tell-us-about-t-5879991 (accessed 20 Dec. 2019).

of scientific knowledge. If we succeed, those who encounter our work might understand that data are not merely the facts of nature—they reflect the interests and commitments of the observer. This is also true for the relationship between our commitments as historians of science and data about the demographic makeup of our field: interest in such information reflects intellectual dispositions and values that already shape scholarship in the history of science. We should make these plain in order to understand the virtues and limits of our discipline. A survey might reveal cultural change that has already happened.

Surely not every historian of science will agree that such values exist within our discipline and—to the degree to which they do—what these commitments are. Some of this disagreement, I believe, is an occupational hazard. As practitioners of a subset of the discipline of history, we have the unique burden of studying subjects who create things that they most often believe are resistant to historical consciousness.[14] This belief can be remarkably powerful—so much so that it shapes our own assessments of whether the scientists we study are producing facts, folly, or something else. Are carbon nanotubes and their effects real if they cannot be seen with the naked eye? Are indigenous people obligated to believe in the matrilineal descent of mtDNA? If science produces things that cannot be seen or that disrupt the cosmologies of non-Western people, must we hold the line and use our writing as a tool of discipline? In asking these questions, it very quickly becomes obvious that it matters whether we believe the science of our subjects. Not only does this reflect what we take science to be; it also mirrors our unspoken social, moral, and political commitments about who we take to be proper scholars and stewards of the field. These implicit commitments manifest as norms that govern who we publish, who we reward, and who we discipline through rejected submissions.

Depending on where you stand concerning the facticity or folly of science, you may or may not believe that the demographic makeup of the scholars in our field or the subjects they take on matters. Thus, tracking this data in a flagship journal might appear at best unnecessary and at worst a politically driven agenda. If we are documenting scientific facts that we (like the scientists we study) believe are transcultural in their significance, then the race, gender, religious beliefs, or methodological orientation of the scholar is peripheral to the work we expect to be produced. However, if we are inclined not to believe the science of our subjects—and embrace something close to what Richard Rorty called an ironic disposition toward truth—then the space between our subjects and our assessments about what they are doing is where the social location of scholars in the field matters decisively.[15]

Consider the following. We wouldn't expect *Isis* to accept a submission on the technology of the cotton gin that did not think meaningfully about black slavery, capitalism, or free labor.[16] Nor

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[14] See Peter Harrison's account of the religious origins of this resistance to historicizing scientific knowledge in *The Territories of Science and Religion* (Chicago: Univ. Chicago Press, 2017).

[15] See Richard Rorty's discussion of private irony and liberal hope in *Contingency, Irony, and Solidarity* (Cambridge: Cambridge Univ. Press, 1989), along with his critique of the Western mind's pursuit of universals in *Philosophy and the Mirror of Nature* (Princeton, N.J.: Princeton Univ. Press, 1979). Another aspect of taking the universalistic claims of science with a grain of salt appears in the criticism known as "the naturalistic fallacy." For a recent discussion see Erika Milam's introductory article in "Focus: The Peculiar Persistence of the Naturalistic Fallacy," *Isis*, 2014, *105*:564–568.

[16] Arthur Schlesinger's 1946 article in *Isis*, "An American Historian Looks at Science and Technology," narrates America's linear march into modernity through scientific and technological innovation and discusses the development of the cotton gin as though it was not invented in the context of transatlantic slavery. This omission, along with the cultural evolutionary arguments about technology, science, and civilization, would not fly under the current editorial leadership of *Isis*. See Arthur Schlesinger, "An American Historian Looks at Science and Technology," *Isis*, 1946, 36(3/4):162–166. For a contemporary study of the cotton gin situated clearly within the context of transatlantic slavery that also discusses models that existed in Africa and Asia before European colonialization see Angele Lakwete's prizewinning book *Inventing the Cotton Gin: Machine and Myth in Antebellum America* (Baltimore: Johns Hopkins Univ. Press, 2005).

would it publish a paper on the science of sex selection in humans were the author not demonstrably skilled in the literature on the construction of gender more broadly within Western science.[17] For the same reason, the journal would not accept a study on lactase persistence mutation in modern humans that failed to discuss how this trait is embedded in nationalist and racialized discourses about fitness and health.[18] Such decision making about whose work has met a threshold of competency and skill reflects value commitments and expectations about the intellectual and social diversity of our field. It also reflects a measure of disbelief about scientific truth already integrated into the discipline.

Historians of science did not always have these sensibilities about what science is and who was the proper historian for it.[19] Nor did our field always locate race, gender, and empire as central factors in the construction of science.[20] This sensibility emerged after the social and intellectual conflicts won by the New Left (ethnic minorities, feminists, union workers, and radicals) during the social revolutions of the 1960s and the subsequent Culture Wars. During this forty-year period the New Left and neoconservatives were at war over the origins of the West, and particularly the nation, along with its founding principles and the types of subjects, knowledge formations, and practices believed necessary for its future.[21] The New Left, postcolonial theorists, and postmodernists laid bare the intellectual dead ends of Western thinking, revealing within its standards for historical knowledge, reason, and truth a profound hostility for non-European traditions, women, and social justice.[22] In the United States the gradual emergence of ethnic and feminist studies programs across the country, beginning at the end of the 1960s, brought with it the optimism that these fields would not only serve students from these communities but would ultimately

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[17] Nancy Leys Stepan's "Race and Gender: The Role of Analogy in Science," *Isis*, 1986, 77:261–277, marks a turning point for the field in documenting how science constructs gender. I would suspect that current submissions on this topic might engage other works published in *Isis*, including Arleen Marcia Tuchman, "Situating Gender: Marie E. Zakrzewska and the Place of Science in Women's Medical Education," *ibid.*, 2004, 95:34–57; Katharine Park, "Women, Gender, and Utopia: *The Death of Nature* and the Historiography of Early Modern Science," *ibid.*, 2006, 97:487–495; and Staffan Bergwik, "An Assemblage of Science and Home: The Gendered Lifestyle of Svante Arrhenius and Early Twentieth-Century Physical Chemistry," *ibid.*, 2014, *105*:265–291.

[18] For a model study of how to situate the genetics of milk consumption beyond adolescence within nationalist and racial discourses about fitness see Andrea S. Wiley, *Cultures of Milk: The Biology and Meaning of Dairy Products in the United States and India* (Cambridge, Mass.: Harvard Univ. Press, 2014). For an article published in *Isis* that does an excellent job linking milk consumption with the logic of race, nationalism, and fitness see Bert Theunissen, "Breeding for Nobility or for Production? Cultures of Dairy Cattle Breeding in the Netherlands, 1945–1995," *Isis*, 2012, *103*:278–309. In a related vein of research see Nikolai Krementsov, "Hormones and the Bolsheviks: From Organotherapy to Experimental Endocrinology, 1918–1929," *ibid.*, 2008, 99:486–518.

[19] Critical attention to the role of race, gender, and empire in the construction of scientific knowledge is clearly absent in the foundational literature in the field: A. Rupert Hall, *The Scientific Revolution, 1500–1800: The Formation of the Modern Scientific Attitude* (New York: Longman, Green, 1954); Herbert Butterfield, *The Origins of Modern Science, 1300–1800* (London: Bell, 1957); Alexandre Koyré, *From the Closed World to the Infinite Universe* (Baltimore: Johns Hopkins Univ. Press, 1957); C. C. Gillespie, *The Edge of Objectivity: An Essay in the History of Scientific Ideas* (Princeton, N.J.: Princeton Univ. Press, 1960); and E. J. Dijksterhuis, *The Mechanization of the World Picture* (Oxford: Oxford Univ. Press, 1961).

[20] Nancy Stepan's *The Idea of Race in Science: Great Britain, 1800–1960* (Hamden, Conn.: Archon, 1982), is a classic study within the history of biology that centers race, class, and empire in the construction of science.

[21] See Andrew Hartman's excellent study *A War for the Soul of America: A History of the Culture Wars* (Chicago: Univ. Chicago Press, 2015). See also Corey Robin, *The Reactionary Mind: Conservatism from Edmund Burke to Donald Trump* (Oxford: Oxford Univ. Press, 2017); Daniel T. Rodgers, *Age of Fracture* (Cambridge, Mass.: Harvard Univ. Press, Belknap, 2011); and James Davison Hunter, *Culture Wars: The Struggle to Define America* (New York: Basic, 1991).

[22] The literature written by representatives of the New Left during the Culture Wars is quite extensive, given the forty years of debate and exchange that marked this conflict. To get a handle on the positions of the New Left a great place to begin is Hartman, *War for the Soul of America*, pp. 9–37, 102–170, 222–252; and Robin D. G. Kelley, *Yo' Mama's Disfunktional: Fighting the Culture Wars in Urban America* (Boston: Beacon Hill, 1997).

reconfigure the core epistemological practices of American thought itself. Neoconservatives and traditionalists, however, likened the New Left to "barbarians in our midst" who threatened the venerable traditions of the Enlightenment that had given the world rationality, science, and liberal democracy.[23]

Intellectual conflict is not governed by judges who declare victory—at least not officially. If one side prevails, it is because the opposing position loses the ability to direct the core thinking and practices of the generation of scholars who come of age after the conflict. Science as a transhistorical, unconsciously Western, masculine, and wholly objective form of knowledge is no longer the premier framework for historians in our field. But the aspirations for recovering this conception of science have not left us.

At times we move about in our research like the characters in Kazuo Ishiguro's novel *The Buried Giant*: there is no explicit animus between us, and yet we sense at some level that the peace we enjoy rests uneasily in the aftermath of a schism that may not be fully resolved.[24] It doesn't take long for a casual conversation about indigenous criticism of science during the annual HSS meeting to divide members concerning the merits of the previous frameworks that established our discipline. But if we collected data about the racial and gender makeup of the field, the work we honor, the content of our most popular program sessions at the HSS, and the scholarship we highlight and publish in *Isis*, we could map both the consequences of the social revolution of the 1960s for science scholarship and the work that remains to be done in our field. Hence the need to survey.

There's no way around the politics and conflicting value commitments that such a survey on diversity might generate. It will push forward a leftist agenda. We should lean into this, largely because, unlike our scientific subjects, we don't have the excuse of being unaware of the political commitments that shape the questions we ask or the social location of the scholars who raise them.

WANGUI MUIGAI

> We've counted all our country's wealth, cattle, wheat and corn
> But no one knows how many future citizens are born
> Now since we've inventoried 'most every thing on earth
> Why don't we take some notice of a human being's birth?[25]

This 1919 rhyme exposed a point of national embarrassment: in the opening decades of the twentieth century, the United States lagged behind many European nations in its "bookkeeping of the human race." Eight years earlier, President William Taft had lamented that federal agencies had a better handle on the number of pigs and cows in each state than the number of babies born. Indeed, inconsistent reporting across states resulted in glaring errors: for example, the total population under the age of one reported in 1911 exceeded the number of births reported

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[23] Joseph Berger, "Scholars Attack Campus 'Radicals,'" *New York Times*, 15 Nov. 1988, p. A22. The literature produced by Neoconservatives and traditionalists during the Culture Wars is just as vast as that from the New Left. I recommend beginning with Hartman, *War for the Soul of America*, pp. 38–69. To see how the Culture Wars shaped the discipline of history see Gertrude Himmelfarb, "Some Reflections on the New History," *American Historical Review*, 1989, *94*:661–670; Lawrence Levine, "The Unpredictable Past: Reflections on Recent American Historiography," *ibid.*, pp. 671–679; and Joan Wallach Scott, "History in Crisis? The Other Side of the Story," *ibid.*, pp. 680–692.

[24] Kazuo Ishiguro, *The Buried Giant* (New York: Vintage, 2015).

[25] J. W. Morgan, "Birth Registration in Colorado," *Colorado Medicine*, 1919, *16*(2):38–41, on p. 40.

for that same year, forcing the U.S. Census Bureau to dismiss its data on the youngest age cohort as largely "valueless."[26]

Yet it wasn't quite that the data did not exist. Rather, the issues were who had the data and what aspects of a newborn's identity should be recorded.[27] As government officials in the early twentieth century sought to improve their vital record keeping, they quickly realized that they had relatively little information on southern states. Throughout the country, but especially in the rural South, those with the most knowledge of when, where, and to whom babies were born were midwives. Often black and often trained by other midwives, the women who witnessed births were viewed by government authorities as ignorant and untrustworthy sources of information.

Nonetheless, the fact remained that to learn about births in the South officials had to depend on the knowledge and labor of black midwives.[28] As government officials from a range of departments, including registrar offices, the Children's Bureau, and the Census Bureau, canvassed the country to enforce birth registration, they deployed a combination of legal and technical measures to make births more visible to the state.[29] Local registrars were compensated for time spent collecting, compiling, and transmitting vital records to state offices, with the payment reflecting the fact that many registrars worked in sparsely populated areas that took significant time to canvass. In contrast, midwives and physicians were not only unpaid for their work documenting births; they faced fines and the possibility of arrest if they failed to file birth certificates on time. Reporting the births and deaths they attended was considered part of their responsibility as health practitioners. Such demands created an environment that was, in the words of the Alabama midwife Margaret Smith, "strict law on us and no pay."[30]

Registrars took the view that midwives stood in the way of collecting accurate data. They closely scrutinized the birth certificates midwives submitted for "misleading or valueless" information. Yet some officials recognized that if they had any hope of reducing errors, the wording on the form would need to be "as simple as possible" in order to "adapt . . . to local needs." At the 1914 annual meeting of the American Public Health Association, Walter Ashby Plecker, the head of Virginia's Bureau of Vital Statistics, spoke about the changes he made to the state's birth certificate. In an effort to know the gender of each baby born, Plecker found that having a category labeled "sex" was too vague. As he explained:

> The need for the term "Boy or Girl," instead of "Sex," was made apparent to me when remonstrating with a colored midwife for always omitting the answer to that essential question. When I discovered that she did not know the meaning of the word sex, I endeavored to make it plain. . . . I then asked, in reference to the certificate in hand, "Was the child a

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[26] Ennion G. Williams, "Remarks on Health," in *Proceedings of the National Conference of Charities and Correction, Forty-First Annual Session, Held in Memphis, Tennessee, May 8–15, 1914* (Fort Wayne, Ind.: Fort Wayne Printing, 1914), p. 257; William Howard Taft, 19 Mar. 1910, quoted in *The Children's Bureau: Yesterday, Today, and Tomorrow* (Washington, D.C.: U.S. Government Printing Office, 1937), p. 11; and Bureau of the Census, *Mortality Statistics, 1911* (Washington, D.C.: U.S. Government Printing Office, 1911), p. 23.

[27] Susan J. Pearson, "'Age Ought to Be a Fact': The Campaign against Child Labor and the Rise of the Birth Certificate," *Journal of American History*, 2015, *101*:1144–1165.

[28] Muigai, "'Something Wasn't Clean'" (cit. n. 5).

[29] Colin Koopman, *How We Became Our Data: A Genealogy of the Informational Person* (Chicago: Univ. Chicago Press, 2019).

[30] Margaret Charles Smith and Linda Janet Holmes, *Listen to Me Good: The Life Story of an Alabama Midwife* (Columbus: Ohio State Univ. Press, 1996), p. 75. For the work of the registrars see William H. Davis, A. A. Whittemore, W. Thurber Fales, Stewart G. Thompson, and Carl F. Raver, "Registration Affairs," *American Journal of Public Health*, 1929, *19*:387–388. For the sanctions facing delinquent midwives and physicians see John A. Foote, "Legislative Measures against Maternal and Infant Mortality," *American Journal of Obstetrics and Diseases of Women and Children*, 1919, *80*:542–543.

boy or a girl?" The question brought a ready response, and that became the accepted form for the question as to sex.

In front of this audience of health and government authorities, Plecker maintained that he kept up "continuous correspondence" with midwives, doctors, and local registrars to correct any mistakes that appeared on birth certificates. Yet, privately, he admitted that his "correspondence" with midwives consisted of threats and coercion. As he told a colleague, "I 'hold a big stick'" over Virginia's midwives.[31]

Through changing the language on the birth certificate form, Plecker also leveraged his authority as registrar to police racial lines and make racial identity hypervisible to the state. He replaced the category "color" with "color or race," arguing that the term "color" alone was imprecise and elicited responses such as "'blond,' 'light skinned,' 'dark,'" and "Indian, Japanese, Chinese." But his real concern was that many babies were being recorded—and passing—as white when at least one of their parents or ancestors was black. Any certificate that did not identify the parents and newborn as either white or colored was sent back for correction. Government handbooks distributed to midwives reminded them that it was their duty and legal obligation to "get the right information for the birth certificate."[32] (See Figure 1.) Thus, this government-issued form became a key tool for policing, from birth, who counted as white and who counted as black in Virginia. Plecker's eugenically guided efforts to control what constituted a valid racial identity would later prove crucial in enforcing Virginia's 1924 "Act to Preserve Racial Integrity," which reified the idea of white purity by defining blacks as having one-sixteenth or more "negro blood" and indigenous peoples as those having the same proportion of "Indian blood."[33]

Often lost in historical accounts of vital records systems is how the development of these systems worked on the ground—in the interactions, confrontations, and disputes over how individual people should be accounted for and the labor involved in constructing and documenting those identities.[34] The tactics government officials used with midwives in the early twentieth century lay bare not only the coercive nature of data gathering, however explicit or implicit it may seem, but also the imbalance of power between those seeking demographic data and those forced to conform to predesignated categories in providing it.[35] As Plecker's exchanges with midwives illustrate, blaming respondents for misunderstanding "essential" demographic categories and filling out forms in unanticipated ways often reveals just how unstable and contested such classificatory projects actually are. As the Editors of *Isis* work on collecting demographic data from potential authors, it is worth carefully considering not only the language and terms included on the surveys, but also the idea of leaving space for respondents to choose how they articulate their identities to a larger organization. Doing so would mean recognizing that, as a "strategy of communication," quantitative tools like surveys function to discipline users, yet they can also provide

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[31] W. A. Plecker, "The Midwife Problem in Virginia," *Virginia Semi-Monthly*, 25 Dec. 1914, *19*:456–458, on p. 456 ("misleading or valueless"); Charles H. Lerrigo, "Simplicity in Preparation of Blanks and Forms," *Amer. J. Publ. Health*, 1922, *12*:116–119, on p. 119; Plecker, "A Standard Certificate of Birth," *ibid.*, 1915, 5:1045–1047, on p. 1045; and Plecker to Arthur Estabrook, 11 Aug. 1924, Folder 3, Box 1, Arthur Estabrook Papers, M. E. Grenander Department of Special Collections and Archives, University at Albany, New York.

[32] Elisabeth H. Clayton, R.N., *A Birth Registration Handbook for Colored Midwives* (Washington, D.C.: U.S. Government Printing Office, 1948), p. 4.

[33] *Code of Virginia, as Amended to Adjournment of General Assembly 1924*, Sect. 67.

[34] Ian Hacking, "Making Up People," in *Historical Ontology* (Cambridge, Mass.: Harvard Univ. Press, 2002), pp. 99–114; and Steven Shapin, "The Invisible Technician," *American Scientist*, 1989, 77:554–563.

[35] See, e.g., recent "QuantCrit" discussions that have emerged at the intersection of education research and critical race theory: "QuantCrit: Rectifying Quantitative Methods through Critical Race Theory," special issue, *Race Ethnicity and Education*, 2018, *21*(2).

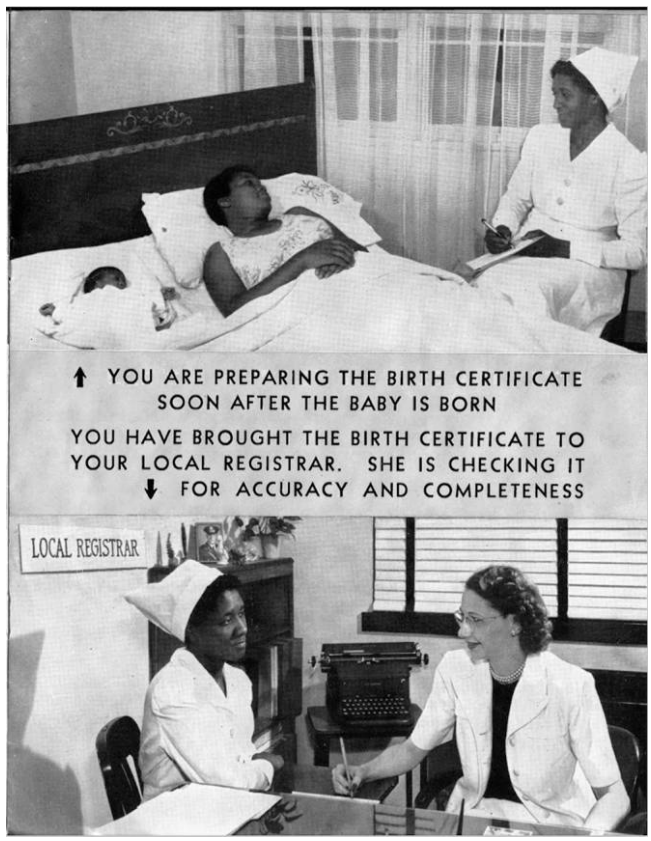

Figure 1. Federal agencies and state health departments distributed midwife manuals that relied on both text and image to make clear midwives' legal duty to comply with data collection procedures. This illustration is from Elisabeth H. Clayton, R.N., *A Birth Registration Handbook for Colored Midwives* (Washington, D.C.: U.S. Government Printing Office, 1948).

those who participate in them with a legitimate venue for persuading the journal, and the field, to discipline itself.[36]

EMILY MERCHANT

The pieces by Terence Keel and Wangui Muigai point to the ways in which knowledge is always embodied and how this matters in science, the history of science, and data collection. Keel's piece emphasizes the importance of diversity in knowledge production and makes a historical argument for collecting data—not only about aspiring *Isis* authors, but also about work that wins awards, popular sessions at HSS meetings, and invitations to give keynotes and other distinguished lectures. He contends that knowledge production changes when people begin to ask "different questions," which "typically happens when interested parties begin to examine the inheritance that shapes the ideas and theories at their disposal." As he demonstrates, groundbreaking critical ideas are more likely to emerge from thinkers whose bodies exclude them from traditional sources of social power. It is these thinkers who are motivated to "unearth the values,

[36] Theodore M. Porter, *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life* (Princeton, N.J.: Princeton Univ. Press, 1995).

ideas, beliefs, and structural determinants of scientific research that are otherwise hidden and, in some cases, willfully ignored." Keel reminds us, for example, that it was a woman who proposed the research on mitochondrial DNA that refocused evolutionary history from Europe to Africa, and it was female scholars who drew attention to the ways science constructs sex and gender. He contends that, over the last fifty years, historians of science have cultivated "an ironic disposition" toward the truth of science, which has been possible because we have paid attention not just to the social location of scientists but also to that of historians of science. Collecting data on contributors to *Isis* would further that project.

Muigai's piece reminds us that data can't be recorded automatically or neutrally. Rather, it must be translated from *somebody's* embodied knowledge into the categories created by the data managers. In the case of vital record keeping in the U.S. South during the first half of the twentieth century, those who held the knowledge that was to be converted into state data were black midwives, whom government authorities viewed as "ignorant and untrustworthy sources of information." Ignorance and untrustworthiness are very different problems when it comes to collecting data. "Ignorance" suggests that the person translating knowledge into data doesn't know or understand the categories used by the data managers. Muigai's example of the form where the category "sex" was changed to the question "Was the child a boy or a girl?" appears as an attempt to address perceived ignorance. "Untrustworthiness" implies resistance on the part of those whose knowledge is to be translated into data and suggests that they are willfully mistranslating their knowledge into the categories produced by the data managers. Muigai doesn't tell us whether this was in fact the case—this question is likely nearly impossible to answer from archival data—but she does make clear that this was a major concern for state authorities. The fact that they used coercive and punitive measures to achieve their data goals suggests a deep-seated anxiety that midwives were intentionally subverting their data categories, thereby undermining not only the integrity of the data itself but also the racist project it was intended to serve. As Muigai points out, the very fact that producing the data required violence or threats of violence "reveals just how unstable and contested these [classifications] actually are." The process of translating *someone's* embodied knowledge into *someone else's* data categories can be a violent act, particularly if those categories were designed to subjugate the very subject positions from which the knowledge was produced in the first place, as is the case in Muigai's example. We also see points of resistance to translating knowledge into data in my own piece on the classification of Latinx people in the U.S. Census and in Elise Burton's contribution on the classification of people of Middle Eastern ancestry in the U.S. Census. These examples further point to the instability of categories used by governmental authorities.

So what should *Isis* do? The pieces I have engaged with here emphasize the importance of diversity in the history of science and suggest that *Isis* should collect data on authors of submitted manuscripts, at least as an initial step. As Keel points out, "a survey might reveal cultural change that has already happened" and "the work that remains to be done." However, I think the Editors should heed Muigai's suggestion to think carefully about "the language and terms included on the surveys" and also consider "leaving space for respondents to choose how they articulate their identities to a larger organization." I would recommend that they resist classification altogether, instead simply offering authors text boxes to describe their identity along the axes the Editors deem relevant (sex, gender, race, career stage, etc.), as Ahmed Ragab suggests below. This format certainly poses challenges to analysis, as Ragab acknowledges, but also opens up possibilities for richer analytic approaches, especially given the computational methods of text analysis emerging from the digital humanities. That said, I agree with Keel that "data alone does not compel change." In this case, I don't think collecting data is enough to accomplish the Editors' aims of increasing diversity and justice. Muigai's piece suggests the importance of getting the buy-in of those whose knowledge is being translated into data. The Editors of *Isis* might try to do

that by printing an announcement explaining why they have decided to collect data, what data will be collected, and how the data will be used. Once data collection has begun, it will also be critical for the Editors to demonstrate that they are using the data for their stated purpose, perhaps by publishing regular analyses of their findings from it.

INTERLUDE: PROJIT BIHARI MUKHARJI

One of the things that came up in our initial discussions about collecting demographic data was the notorious "global question." Many will acknowledge that HSS, not to mention *Isis*, is in one way or another an increasingly "global" platform. But what exactly does this mean and how does it impact the proposed demographic data collection initiative?

Many of us working on, or with, life histories that stretch beyond "The West" have increasingly become wary of "global talk" precisely because it assumes an easy circulation of important categories. This includes the mistaken belief that somehow the same racial or gender categories are equally meaningful everywhere. Criticizing this smoothness and fluidity, Warwick Anderson has rechristened the much-touted "global turn" as a "hydraulic turn." He asks what happens to twentieth-century racial categories when they are relocated to the Global South.[37] Consider, for instance, the histories of that most blood-soaked and abominable of twentieth-century racial categories: Aryan. Not only was the category itself deeply implicated in the historic studies of classical Sanskrit texts in the nineteenth century, but it was also reappropriated by a wide range of socially elite but colonized groups from South Asia to New Zealand. In the hands of upper-caste Hindu nationalists of the early twentieth century and beyond, the raced and biologized category came to acquire valences and politics that only partially mapped onto the way Aryanism played out in Euro-America.[38]

What makes this question more pressing, and indeed difficult to answer, is that the "Global South" is no longer coincident with the geographic south. As Boaventura de Sousa Santos points out, in contemporary postcolonial societies the "south" and the "north" frequently coexist at the same geographic locations.[39] Take, for example, the case of Bhagat Singh Thind, whom Emily Merchant briefly mentions later on. Thind, a Sikh soldier from the Punjab who had fought in World War I, tried to obtain and retain U.S. citizenship in the 1920s on the grounds that he was a "high caste Aryan" and therefore a "white" person. Now, in the U.S. context at the time, this was clearly an attempt by a member of a severely disenfranchised group to obtain legal rights. But the basis of the claim was embedded in the complicated history of how Aryanism in British India had become a raced and casted idiom that was partially shared between the colonized and the colonizer. It also quite clearly demonstrated that what it meant to be a "white" person had very different valences in South Asia and the United States. Yet these different valences could no longer be neatly parsed into their "local contexts." One context bled into another.

How these localized contexts become interpolated is not just an issue for those who study these subjects. It is also an issue in a much more mundane demographic context. HSS now has quite a few members who have not lived their entire lives within a single national context. Let me offer my own example. I was born and raised in postcolonial India. Some of my ancestors had, at various points during the course of the twentieth century, been evicted from their

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[37] Warwick Anderson, "Making Global Health History: The Postcolonial Worldliness of Biomedicine," *Soc. Hist. Med.*, 2014, *27*:372–384; and Anderson, "Racial Conceptions in the Global South," *Isis*, 2014, *105*:782–792.

[38] Tony Ballantyne, *Orientalism and Race: Aryanism in the British Empire* (Basingstoke: Palgrave Macmillan, 2002); and Projit Bihari Mukharji, "The Bengali Pharaoh: Upper-Caste Aryanism, Pan-Egyptianism, and the Contested History of Biometric Nationalism in Twentieth-Century Bengal," *Comp. Stud. Soc. Hist.*, 2017, *59*:446–476.

[39] Boaventura de Sousa Santos, *The End of the Cognitive Empire: The Coming of Age of the Epistemologies of the South* (Durham, N.C.: Duke Univ. Press, 2018).

homelands in what are now postcolonial Bangladesh and Myanmar. I obtained my Ph.D. in the United Kingdom, worked briefly in Canada, and am today employed at a U.S. university. In each of these countries where I have lived and worked, or with which I have a biographical connection, I would be classified according to entirely different categories. In India, for instance, I was classified as a Bengali and a Hindu, in the United Kingdom as an Asian/Asian British-Indian, and in the United States as an Asian. From a purely pragmatic point of view, then, had *Isis* been collecting demographic data for the last two decades I would have been classified differently at different times. This would also have created quirky statistical artifacts that were only tangentially related to my biographical self.

These complexities of racial categorization are even trickier when we consider gender categories. If I may once more have recourse to South Asian examples, two points are worth noting. First, precolonial medical texts from the region classified gender without any exclusive emphasis on either anatomical or psychological criteria. Instead, a number of categorical entities, such as *kliba*, *napumsaka*, *sandha*, *pandaka*, and so forth, were recognized that did not fit into the male/female binary. And these categories were themselves further subcategorized. The *Susruta-samhita*, one of the oldest Sanskrit works on medicine, dating from the first millennium of the Common Era, included, for instance, six types of *sandhas*. These included the "fellator," the "olfactory erotic," and the "voyeur"—categories where the emphasis was on the type of sexual activity rather than on either anatomy or psychology.[40]

Second, and more immediately, scholars have demonstrated how the transnational movements around nonbinary genders and sexualities have themselves often become hegemonic and politically problematic modes of engaging, documenting, and empowering these very nonbinary sexualities. Transnational discourses of thirdness, queerness, and LGBTQ have all, on occasion, served further to obfuscate and marginalize the very lived sexualities and genders that they claimed to be representing. Similarly, scholars have also pointed out that the queer of color, even when they inhabit iconically "Western" locations, such as the gay Filipino immigrants living in New York City, carve out their own distinctive queer modernities.[41]

Moreover, scholars of both caste/race and gender in South Asia have pointed out that the issue is not merely one of *misrepresentation*. Instead, categorical representations when underwritten by institutional power over a period of time can actually produce new forms of self-identification. Ever since the pioneering work done by Bernard S. Cohn, there has emerged in South Asian scholarship a rich body of work that documents how colonial censuses and the other cultures of documenting identities in the long run very literally produced contemporary caste and religious identities.[42] These works alert us to the simple fact that categories used to count people do not simply reflect or fail to reflect preexisting identities; they also actively intervene in the world and shape the respondent's sense of identity. (See Figure 2.)

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[40] Michael J. Sweet and Leonard Zwilling, "The First Medicalization: The Taxonomy and Etiology of Queerness in Classical Indian Medicine," *Journal of the History of Sexuality*, 1993, 3:590–607.

[41] Lawrence Cohen, "The Pleasures of Castration: The Postoperative Status of Hijras, Jankhas, and Academics," in *Sexual Nature/Sexual Culture*, ed. Paul R. Abramson and Steven D. Pinkerton (Chicago: Univ. Chicago Press, 1995), pp. 276–304; and Martin F. Manalasan, *Global Divas: Filipino Gay Men in the Diaspora* (Durham, N.C.: Duke Univ. Press, 2003).

[42] Bernard S. Cohn, "The Census, Social Structure, and Objectification in South Asia," in *An Anthropologist among Historians and Other Essays*, ed. Cohn (Delhi: Oxford Univ. Press, 1987), pp. 224–254. See also Nicholas B. Dirks, *Castes of Mind: Colonialism and the Making of Modern India* (Princeton, N.J.: Princeton Univ. Press, 2011). For an account of how these colonial categories were taken up by Indian scientists see Projit B. Mukharji, "From Serosocial to Sanguinary Identities: Caste, Transnational Race Science, and the Shifting Metonymies of Blood Group B, India, c. 1918–1960," *Indian Economic and Social History Review*, 2014, 51:143–176. For a fascinating recent study looking at how colonial ideas about gender identities have gotten reworked into complex modes of self-representation see Shakthi Nataraj, "Criminal 'Folk' and Legal 'Lore': The Kidnap and Castrate Narrative in Colonial India and Contemporary Chennai," *South Asian History and Culture*, 2017, 8:523–541.

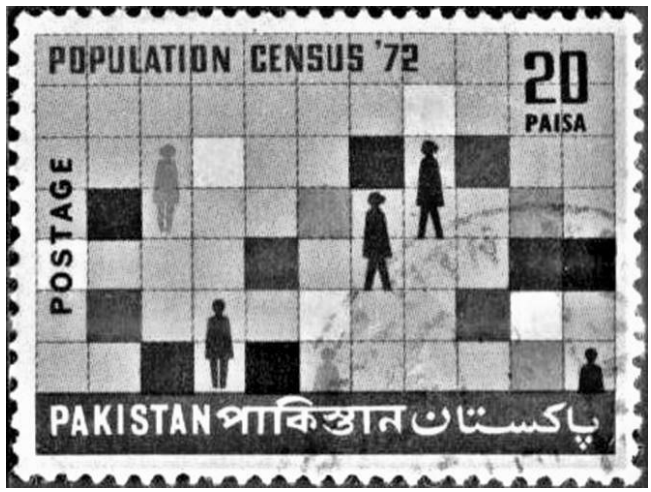

Figure 2. Pakistani postage stamp released in 1972 to commemorate a century of population counting on the Subcontinent. This came a year after the country was divided in two after a violent civil war fought over ethnic and linguistic differences.

The glib talk about globality and interconnectivity, for us, therefore raised a series of prickly and seemingly intractable questions. The issue was no longer simply about the circulation of raced and gendered forms of exclusion from the West to the Rest but, rather, the multiple mobilities and directionalities that interpolated repeatedly reworked categories and contexts into one another. We wanted to acknowledge that it was no longer possible to absolve ourselves of our worldliness by paying lip service to the "local contexts" that were comfortably ensconced somewhere "out there."

To that end, we wished to invite from within the ranks of the HSS scholars who had not simply "worked on" multiple locales but also "worked in" a variety of lived and academic cultures. We were lucky that Ahmed Ragab, Suman Seth, and Elise K. Burton agreed to join our conversation. Each of them has lived and worked *in*—and not merely worked *on*—multiple different academic and national milieus. Together, they show us why a wider geographic canvas is both an inescapable component of and a complex challenge to how we frame questions about our discipline and demography. Ragab reminds us that what "history of science" is is intimately tied up with who we think "we" are. As Keith Wailoo points out with regard to individual identities, the question "Who am I?" inevitably needs "starting points" and "stopping points" that will pare down the multiple possible lines of descent that any individual might draw through her family tree.[43] Tracing backward through my father's father's father would, for instance, yield one type of identity, while doing the same through my mother's mother's mother would yield something very different, but in each case we would be simultaneously omitting other possibilities. Ragab shows that professional historians of science also implicitly ask "Who are we?" Their answer determines what they consider "science" and which lines of descent they value and which they omit. Seth takes a different track. He queries what happens when someone else gets to answer the "Who am I?" question for me. He encourages us to think of the unexpected unfolding of identities as expressive answers about the self are repositioned by others seeking to create descriptive

[43] Keith Wailoo, "Who Am I? Genes and the Problem of Historical Identity," in *Genetics and the Unsettled Past: The Collision of DNA, Race, and History*, ed. Wailoo, Alondra Nelson, and Catherine Lee (New Brunswick, N.J.: Rutgers Univ. Press, 2012), pp. 13–19.

and even ascriptive identities. For her part, Burton invites us to look beyond the simple answers to identity questions and see instead how identities actually play out in the day-to-day workings of *Isis*. As she points out, answers to demographic questions often hide as much as they reveal. Their value, whether positive or negative, lies in their functionality.

ELISE K. BURTON

Demographic surveys are a diagnostic, not a corrective, for issues of diversity and inclusion. They can serve an important function in revealing cultures of academic exclusion. However, the categories they use often obscure as much as they reveal. Earlier this year, I read the National Science Foundation's demographic survey data on U.S. Ph.D. graduates by discipline. I noted, to my dismay, that in the year I obtained my doctorate in Middle Eastern history not a single African American or Indigenous American graduated in my field. In fact, out of all the U.S.-citizen graduates in 2017, 84 percent identified as white, less than 8 percent were of Hispanic or Asian descent, and another 8 percent did not respond or selected "other race." The statistics for the history of science and technology are not substantially different.[44] But the Middle Eastern case is particularly useful for problematizing the demographic categories typically used to collect diversity data in the United States. Namely, many of my fellow graduates that year identified Arab, Iranian, Turkish, or other Middle Eastern origins, and I wondered how many of their representational and scholarly contributions to the field's diversity were therefore lost in the "white" category.

Historically, the racial whiteness of Middle Eastern peoples was a hard-won achievement. During the late nineteenth and early twentieth centuries, Arabs, Turks, and Iranians fought to be classified as racially European, Caucasoid, or white in order to establish political rights to territorial sovereignty and self-determination, as well as immigration and naturalization rights in the United States. In venues ranging from Middle Eastern universities to the U.S. Supreme Court to the League of Nations, they marshaled data from physical anthropology, linguistics, and history to claim this whiteness on scientific grounds. The relative success of these efforts in the United States meant that Persia and the Ottoman-ruled lands to its west were spared inclusion in the "Asiatic Barred Zone" that prevented all immigration and naturalization from South and East Asia after 1917.[45] During the interwar period, the intelligentsia of the newly emerging Turkish, Iranian, and Arab nation-states helped to institutionalize the discourses of race science and Middle Eastern whiteness in national education systems and university research agendas. For example, my studies of the region's human geneticists show how they completely took for granted that their own nationalities belonged to the "white race."

But this whiteness has always been a double-edged sword. Although national elites leveraged this racial category in the international sphere, it was not particularly useful for understanding dynamics within Middle Eastern societies. In most local contexts, the notion of whiteness became legible only in contradistinction to a few groups with known migration histories, such as black African descendants of former slaves and "Mongoloid" Turkmen nomads. Otherwise, being white played little role in individual or group identity formation compared to the many national, religious, linguistic, tribal, class, gender, and other identifications that structure Middle Eastern social life and denote a vast array of intersectional subject positions. Accordingly, many

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[44] National Science Foundation, National Center for Science and Engineering Statistics, *Doctorate Recipients from U.S. Universities: 2017*, Special Report NSF 19-301 (Alexandria, Va.: National Science Foundation, 2018), https://ncses.nsf.gov/pubs/nsf19301/; see esp. Table 22.

[45] See Sarah M. A. Gualtieri, *Between Arab and White: Race and Ethnicity in the Early Syrian American Diaspora* (Berkeley: Univ. California Press, 2009); Murat Ergin, *Is the Turk a White Man? Race and Modernity in the Making of Turkish Identity* (Leiden: Brill, 2017); and Reza Zia-Ebrahimi, *The Emergence of Iranian Nationalism: Race and the Politics of Dislocation* (New York: Columbia Univ. Press, 2016).

geneticists working in the Middle East set out to study the local populations as tribes, religious communities, or linguistic groups, not as representatives of a white race. But their fixation on working with allegedly endogamous groups ignored the problem that their demographic categories invented mutually exclusive identities, rather than reflecting their research subjects' lived experience of contextual identity. My primary sources are replete with geneticists' complaints about individuals who misrepresented their religious or tribal affiliation, spoke languages that didn't reflect their "true" ethnicity, and otherwise fouled up researchers' demographic statistics. Ironically, even as scientists tried to restrict the fluidity of social identity to make biological knowledge, they justified the urgency of their work by pointing to rising rates of communal outmarriage and new hybrid identities.[46]

Meanwhile, Middle Eastern immigrants to the United States in the postwar period found that neither their legal whiteness nor their self-identifications as white, Caucasian, or Aryan shielded them from racialized discrimination. By the late 1970s, even as the U.S. federal government officially designated people of Middle Eastern ancestry as "white" for all demographic data-collection purposes, Arabs and Iranians were increasingly vilified in response to international political events. Beginning in the 1990s, Arab community activists sought to add new census categories like "Arab American" or "Middle Eastern/North African" to allow an accurate count of these communities, which they argued would enable local and federal governments to meet community social needs and grant access to minority benefits that would remediate discrimination. Similarly, in advance of the 2010 census, Iranian-American organizations campaigned among community members to identify as "some other race" and write in "Iranian." Shortly thereafter, Iranian-American geneticists initiated a diaspora-oriented Iranian Genome Project, which recruited participants using discourses about the unique biological history of the "diverse Iranian family" and the need for Iranian representation and inclusion in genomic medicine.[47] However, the "strategic essentialism" mobilized by these campaigns was complicated by the fact that many Arabic-speaking or Iranian-expatriate individuals identified primarily with alternative national, religious, or linguistic categories arising from pre-diasporic socialization.[48] For example, Lebanese and Iraqi Christians may prefer to identify their ancestry as Phoenician or Assyrian rather than Arab; meanwhile, Baha'is, Jews, Armenians, and Kurds from Iran pursue connections with other members of their "internal ethnicity" rather than joining Iranian "umbrella" organizations.[49] On the other hand, these patterns do not necessarily hold for second-generation immigrants, whose experiences growing up in a post-9/11 United States have enhanced feelings of solidarity that cross religious and nationalist categories. For example, in 2013 second-generation Arab and Iranian Americans studying at the University of California successfully lobbied for a new systemwide race/ethnicity category of "Southwest Asian and North African," inventing a new panethnicity representative of their shared diasporic experiences.[50] The Trump administration's severe immigration and travel restrictions on nationals of several Middle Eastern countries—as well as its active promotion of hostilities against Muslims—may hasten the adoption of similar ethnic categories across different kinds of U.S. institutions, if not the federal government.

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[46] Burton, *Genetic Crossroads* (cit. n. 1).

[47] Gualtieri, *Between Arab and White* (cit. n. 45), pp. 182–186; Neda Maghbouleh, *The Limits of Whiteness: Iranian Americans and the Everyday Politics of Race* (Stanford, Calif.: Stanford Univ. Press, 2017), p. 186; and Burton, "Narrating Ethnicity and Diversity in Middle Eastern National Genome Projects" (cit. n. 1).

[48] Gualtieri, *Between Arab and White*, p. 180, adapting the term "strategic essentialism" from Gayatri Spivak.

[49] On Lebanese and Iraqi Christians see Gualtieri, *Between Arab and White*, p. 189. On "internal ethnicity" see Mehdi Bozorgmehr, "Internal Ethnicity: Iranians in Los Angeles," *Sociological Perspectives*, 1997, *40*:387–408. See also Melissa Kelly, "Transnational Diasporic Identities: Unity and Diversity in Iranian-Focused Organizations in Sweden," *Comparative Studies of South Asia, Africa, and the Middle East*, 2011, *31*:443–454.

[50] Maghbouleh, *Limits of Whiteness* (cit. n. 47), pp. 105–107.

This contentious history of racial categorization for social and biological study, and the geographical contingency of appropriate demographic categories, suggests that no academic discipline or journal can "survey its way to cultural change." So how can scholars survey the state of the field (and, one would hope, the impact of future diversity initiatives) in the History of Science Society generally and in *Isis* more specifically? The proposed demographic survey can foreground categories like employment status, current and past geographic/institutional locations, native language, and perhaps income level. Because these data highlight professional and socioeconomic marginalization in ways that often correlate with marginalized (racial, queer, etc.) identities, they may offer more actionable and less intrusive information than asking people to identify their heritage, sexuality, or disability in mutually exclusive ways. In my view, however, most of the necessary action will have to take place in university departments, which are responsible for the admissions, mentoring, and hiring decisions that make a diverse and inclusive discipline possible.

Isis has a powerful role in setting the tone for the field and should reflect on whether its editorial models have kept pace with the apparent diversification and globalization of the discipline. In particular, the Editorial Board should enact a clear stance on challenging the fundamentally Eurocentric nature of the historiography of science. This can be expressed by continuing some of the journal's ongoing activities—for example, by commissioning special sections on a wide range of topics and recruiting diverse scholars to contribute. But more basic changes in the peer-review process can make *Isis* and other history of science journals more welcoming to different kinds of scholars. For evaluating stand-alone research articles, of course, the quality and originality of the scholarship should always take precedence. But editors and peer reviewers should consider the potentially chilling language in which these subjective judgments are delivered. A common problem with top-tier journals like *Isis*, which rightly emphasize the need to frame one's articles for a broad and nonspecialized audience, is how scholars of non-Western geographies are requested to make their work relevant to a field still dominated by Europeanists and Americanists. For example, I have rarely been asked by editors or reviewers to elaborate on the importance of the particular scientific fields, institutions, or events I have written about. Instead, I regularly face demands that I explicitly justify "what is to be gained by drawing attention to actors and debates located in [Middle Eastern countries]" and "what makes the case of the Middle East so significant."

It may be that other historians of science are asked to justify why the case of North America is so significant, or why we should pay attention to actors and debates located in Europe, but I am skeptical. To me, the clear implication of these comments is that non-Western actors and geographies are not essential to the history of science canon. I am asked to articulate their significance in relation to a supposedly (though not to me) more familiar historiography of the North Atlantic. This is not what it should mean to pitch one's work to a broad readership, and I hope *Isis* and other journals in the field will take this into account when evaluating scholarship involving non-Western regions and languages, as well as the broader categories of race, gender, sexuality, and disability. Opening up space for topical diversity in history of science scholarship and pedagogy—a key aim of many of the "decolonize" movements now active in university history departments—offers one path toward the discipline's cultural change and, aspirationally, its demographic inclusiveness.

AHMED RAGAB

The French military doctor Lucien Leclerc's 1876 book *L'histoire de la médecine Arabe* was one of the earliest and most celebrated volumes dedicated to the history of "Arab medicine." Leclerc viewed the project as significant for understanding the history of medicine in Europe. After all, he explained, it was the work of Arab authors that sparked the European Renaissance and the

rise of modern European civilization, of which he himself was a prophet. In this view, the beginning and the end of his book were essentially predetermined. The beginning was marked by the rise of Islam, which Leclerc argued provided Arab tribes with the impetus to unite and invade the world. He explained that Arabs did not have medicine of their own except for little recipes that they copied from the Persians. Therefore, the history of Arab medicine could not start until Arabs left their "peninsula protected by sea and sand" and ventured forth to encounter the more "civilized" empires in the Near East.[51] Following this first introductory volume, Leclerc moved to discussing "the ninth century or the century of translation." This is followed by four *livres* on the tenth, eleventh, twelfth, and thirteenth centuries. The seventh *livre* addressed "the centuries of decline," while the last *livre* focused on the translation of Arabic medicine to Latin. The overall structure of Leclerc's book does not seem particularly odd or outrageously outdated, especially when compared to more recent textbooks and course offerings, which continue to place the narrative of Islamic medicine within a chronology of a Golden Age followed by a decline. Much ink, mine included, has been spilled on the shortcomings of this Golden Age/Decline dynamic. In this piece I will not attempt to rehearse arguments against that paradigm. Instead, I am interested in the narrative's indexical function and the role it plays as an analytical and historiographic device.

A physician by training, Leclerc was excavating a genealogy for his own practice—one that relied on a kinship structure that reliably distinguishes "our" from "other" medicine. "Arab medicine" was attractive because it represented an ancestor of European medicine. This genealogical impulse was evident in the fact that Leclerc concluded each *livre* with "a list of physicians," organized by places like Persia, Iraq, Egypt, Maghrib, and Spain. The lists functioned as family trees where some names were more familiar than others but that provided an overall structure of where one came from. For instance, Abū Bakr al-Rāzī was rendered unambiguously as "Rhazes"—similar to all those who were familiar enough to acquire a Latinized name. Others, however, retained a transliterated name, and some attained the prefix "Chr.," indicating that they were surgeons. The lists were intended not only to collect but also to organize and familiarize.

Leclerc was also a colonial officer and a military surgeon; he fought in Algeria between 1840 and 1844. His training in Arabic, his knowledge of Islamic and Arabic history, and the manuscripts he built his research on were deeply connected to his colonial career and to his communications afterward with colonial officers serving throughout the Near East. Leclerc's book is indexical of the colonial structure of acquisition and extraction and the foregrounding of the assumption that natives were unable meaningfully to write their own histories. The Golden Age/Decline narrative is therefore not simply a mode of writing that privileges European knowledge; it is also a tool of epistemological organization that facilitates the acquisition of Near Eastern history and its inclusion within the European archive. Similar to extracting minerals and peoples, this process of extraction is dictated in large part by the demands of the colonial market (in this case, of knowledge) and creates a system of worth that governs which names, details, and centuries are worthy and which are not. The economy on which this narrative is built has structured the current state of our discipline in a manner that renders reparative readings extremely challenging, if not impossible. The lasting power of this economy is rooted not only in the goods that it extracted, including the manuscripts that we continue to rely on, but also in the ones that it destroyed in the process. Even more important, the power of this economy lies precisely in the value system that enables and gives meaning to its categories and that governed its process of extraction. Here, even reparations, often performed through populating the annals of Western or Western-like science with nonwhite nonmale bodies, will not fully erode the power of this system

[51] Lucien Leclerc, *L'histoire de la médecine Arabe* (Paris: E. Leroux, 1876), p. 2.

because these epistemic reparations will continue to rely on the same system of values that maintains the old extractive economy.

Leclerc's project, and the survival of much of its lexicon in our discipline today, indexes the centrality of imagined kinship, or the genealogy of particular familiar forms of knowledge, as a justification for investigations in the history of science. The discipline's traditional and core object of knowledge remains the ancestry and the genealogy of modern Euro-American science. This investigation is conducted through extractive epistemologies that trace their own genealogies to the colonial legacy. In this context, the only knowledge that matters is one that is kin to modern Euro-American science, and the closer the kinship the more important the knowledge. This kinship and the attendant extractive epistemologies are interdependent, as this kinship remains the key determinant of worth that structures the discipline's main archives and therefore designates the targets of extractive practices.

The question that prompted this conversation is one that is equally contingent on, and connected to, the process of archive building referenced here. It is evidently part of many efforts across the field to change its traditional racial and gendered composition. Yet many of these efforts have been conditioned by the desire to repair, fix, and maintain inherited archives—that is, to preserve the structures of meaning indexed in our epistemologies. The dynamic relation between the need to cope with a changing field and its changing demographics and the staying power of existing regimes of knowledge manifests itself in the regime of statistical diversity, which functions to offer empirical evidence for symbolic representations. At the same time, this regime functions to limit and delineate the categories of "diversity" by creating (or curating) lists of possibilities that one needs to fit into. The limited list is necessary for the survival of such a regime, whose specters can be summoned only in graph and number forms—icons of its own scientific power.

In the same way that Leclerc's lists indexed a regime of kinship and worth, where those included are seen as comprehensible, lists of "races" and "ethnicities" discipline possibilities within the parameters of what is comprehensible for/by the white gaze. Here, racial categories are rendered global, and the meanings they acquire in the Euro-American context turn everything else meaningless or unimportant. To be sure, racial and ethnic categories travel across the same lines of migration and outsourced labor. But this travel should not be confused with full interchangeability or with having a single global meaning. Indeed, the only single global meaning that is possible here is one derived from a Euro-American archive. The list of statistical rationality is therefore incapable of, and is not designed for, a change that can threaten the overall archive of meanings that such lists rely on.

My goal here is not to intervene in a particular mode of conducting statistics but, rather, to understand the modes of rationality for which these statistical regimes are indexical and how this rationality is implicated in the maintenance of an existing Euro-American archive of meanings that awards worth based on conformity. There is simply no way to structure a list that is fully inclusive, let alone one that transcends the inherent valuation of categories named and categories referred to as "other." While the answer to this is to simply allow for direct input that is independent of lists, such an answer threatens the rationality of the statistical regime, because this alternative requires a serious departure from the modes of rationality that govern the discipline and discipline its governance. Abandoning the summons of numbers and graphs for the incoherent diversity of identities and priorities requires the admission of experiential knowledge accumulated by scholars—knowledge that affirms that *Isis* is "too white"—as a measure of truth. It also helpfully confuses the boundaries between scholars and their scholarship, as the topics and archives engaged become the only accessible echo of the scholars' own experiential knowledge. I label this confusion "helpful" because it breaks down the dissonance between the reality of significant overlap between scholars' backgrounds and identities and their topics of interest, on the one

hand, and the mythology of free unencumbered scholars permitted or desiring to work on whatever is important (read: white), on the other. This dissonance is in itself responsible for maintaining various structures of precarious labor that influence our field and help retain its fetishization of modern Euro-American science.

Transcending the regime of statistical representation requires additional refusals. The imaginary that governs this regime operates through separating representation from formation: sites of power—such as major conferences and major publications, including *Isis*—are imagined as representatives and not as formative of the field. In this context, *Isis* becomes a representation of best scholarship in the field. Its historically observable tilt toward Euro-American modernity is explainable by the state of the field itself. Yet *Isis* is a key component of the discipline's archive. Its own "lists" are as significant as Leclerc's in creating kin and attributing worth. In this context, the journal's historical shirking of responsibility for mentorship and training relies precisely on the abundance of mentorship and training in the areas that are considered particularly valuable, further feeding an unending loop of worth-making and of trading in this already-made worth. Breaking this cycle requires a different imaginary of the journal as a vehicle for change and an archive of knowledge that is, similar to other archives, often intentionally and carefully curated.

To be sure, I stand firmly on the side of collecting information and conducting surveys. However, I question the trappings of a statistical rationality that only admits the worth of lists, percentages, and graphs and that understands diversity as a goal-oriented endeavor where one can reach a magic number of "sufficient (read: enough) diversity." Instead, I argue for open-ended surveys that interrupt these rationalities and the archives they build. The results of open surveys that ask for race or ethnicity without lists will create a nongraphable outcome, making it quasi-impossible to quantify the diversity of authors fully, but will permit experiential identities to cohere at will.

SUMAN SETH

According to his biographer, the "great merit" of Henry Marshall's *Notes on the Medical Topography of the Interior of Ceylon* (1821) "consisted in the numerical statistics it contains regarding the mortality and diseases of the troops—a *new feature* in medical works at the time it was published." That aspect of the book may not have been obvious to someone merely skimming its three sections: a medical topography of the island; a broad description of the health of the troops there; and some "brief remarks on the prevailing diseases." Yet its numerical data was also the aspect that Marshall, who had first served as assistant surgeon and then surgeon to different Ceylon regiments before being promoted to military staff, himself most strongly recommended to the reader. "I consider the Tables and Returns," he wrote, "the most interesting part of the Notes." With that data he was able to generalize with some precision about the racialized susceptibilities of the various peoples who made up the British armed forces in Ceylon in the first decades of the nineteenth century. Monthly returns showed the high "frequency of inflammatory affections of the chest among [Malays], when compared with Europeans"; the liability of Indians to dysentery, intermittent fevers, and ulcers; the seeming exemption of Africans (Marshall referred to them as "Caffries") from death by endemic fever, but their susceptibility to consumption; and the disposition of Europeans to fevers, liver diseases, and dysentery.[52]

[52] John Brown, "Dr. Henry Marshall and Military Hygiene," in *Horae Subsecivae*, 4th ed. (Edinburgh: David Douglas, 1882), pp. 135–191, on p. 154; and Henry Marshall, *Notes on the Medical Topography of the Interior of Ceylon; And on the Health of the Troops Employed in the Kandyan Provinces, during the Years 1815, 1816, 1817, 1818, 1819, and 1820; With Brief Remarks on the Prevailing Diseases* (London: Burgess & Hill, 1821), pp. vi ("most interesting"), 130–132.

There was, of course, nothing new in principle about either collecting or discussing numerical data about the sick and the dead in the military. The form of this data, however, had changed dramatically with the appointment of Sir James McGrigor as Director General of the Army Medical Department in 1815. McGrigor, wrote Marshall, acknowledging the source of his materials, "made many improvements in the mode of conducting the medical concerns of the army, particularly regarding accurate and comprehensive sick returns." Whereas, at least in McGrigor's telling, previous administrations had collected data in order to attend to "the financial concerns of the department, to the economy and the minute expenditure on account of the hospitals; in fact, to pounds, shillings, and pence," his own "extreme desire" was "to turn the reports and returns rendered by the medical officers of the army to the account of science and the improvement of the officers themselves."[53] To put this intent into action, McGrigor issued forms to regimental surgeons throughout Great Britain and Ireland and to the heads of medical staff in the colonies and required that they submit half-yearly and yearly reports on the health of the troops, the prevalent diseases in the stations they occupied, and the modes of cure and care adopted to treat them. In Ceylon, this task fell to Dr. Charles Farrell, the second figure Marshall would credit with gathering the data he would use in his *Notes*.

Perhaps because his major focus was British troops as they served throughout the globe, McGrigor does not seem to have asked for two potentially salient pieces of information on his forms. According to the medical logic of the day, one of the most important things to know about patients suffering from an illness in a foreign clime was where they had been born or, at the very least, where they had recently spent a significant period of time. To what climate, medical men systematically asked in the eighteenth century, had an individual been "seasoned"? The closer the climate of their seasoning to that in which they now found themselves, the less severe their sicknesses were likely to be. This had little to do with what we might today consider their "race." Were someone of African descent to become seasoned to the climate of squally England, he too would suffer when he reached the West Indies. Seasoning was also impermanent: European West India hands who had served for decades in the tropics often balked at the thought of returning to the land of their fathers and brothers, where the diseases of cold climates stalked them. Seasoning tended to be a discourse of nativity and anti-racialization, concerned not with fixity and essence but with accidents of birth and habituation.[54]

McGrigor also did not, as far as I have been able to tell, ask for information on the patient's race, but in this case military organization supplied what the returns did not. The British army at the time was broadly segregated, with regiments largely composed of either European or non-European troops (officers being the exception).The medical returns from Ceylon, for example, divided the troops only into two categories: Europeans and "Blacks," the latter category including those of "African," "Malay," and "Indian" descent. Within the Ceylon regiments, mixing of so-called black troops was not uncommon. Marshall noted, for example, that while the 1st Ceylon was made up of "Malays," "chiefly procured from the islands of Java and Sumatra," but with a sizable segment made up of "natives of Ceylon, but of Malay descent," the 2nd Ceylon regiment was built from five companies of men of African and five of Indian descent.[55] Reading "racial"

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[53] Marshall, *Notes on the Medical Topography of the Interior of Ceylon*, p. vi; and James McGrigor, *The Autobiography and Services of Sir James McGrigor, Bart.* (London: Longman, Green, Longman & Roberts, 1861), p. 367. The new medical reports, it has been claimed, "were of a very different character from those huckster-like accounts of the expenditure of rhubarb, oatmeal, lint-plaster, &c. to which the medical statistics of the army had hitherto been chiefly restricted": "McGrigor, Sir James," in *A Biographical Dictionary of Eminent Scotsmen*, ed. R. Chambers and T. Thomson (London: Blackie and Son, 1870), Vol. 3, pp. 32–42, on p. 41.

[54] Seth, *Difference and Disease* (cit. n. 8).

[55] Marshall, *Notes on the Medical Topography of the Interior of Ceylon* (cit. n. 52), p. 76.

data about "Malay's" from the returns of the 1st Ceylon regiment was thus, for Marshall, reasonably straightforward, while separating the "Indian" and "African" data for the 2nd Ceylon required more ingenuity. One will note, however, that once the returns were complete, the difference between those "Malay" troops born on Java and Sumatra and those born on Ceylon had been erased. From at least two (and probably three) categories defined by native place and seasoning, Marshall's data produced one category that was defined by race.

Marshall would go on to an illustrious career. In 1830 he was promoted to deputy-inspector of hospitals. His multiple publications on military medical statistics led soon afterward to his being appointed, together with Alexander Tulloch, to synthesize and analyze the mass of data that McGrigor's efforts had produced. The results were four published reports on sickness, mortality, and invaliding in the British Army across the globe.[56] And in all of them race was an essential category of analysis. Indeed, in those documents, read across the empire, race became a medical and statistical fact in a way that it had not been before, while "seasoning" and its nineteenth-century near-cognate, "acclimatization," were systematically downplayed, if not denigrated. If one example may stand for many, we can look at the effect of such statistical arguments on Charles Darwin, a figure usually uninclined to see essential and largely unchangeable differences between races. "Negroes," he would write in his *Descent of Man*, citing a summary of results penned by Tulloch, "escape to a large extent the fatal intermittent fevers, that prevail along at least 2600 miles of the shores of Africa, and which annually cause one-fifth of the white settlers to die, and another fifth to return home invalided. This immunity in the negro seems to be partly inherent, depending on some unknown peculiarity of constitution, and partly the result of acclimatisation."[57]

Allow me to draw the lesson regarding our Society's collection of data explicitly. Some time ago, Ian Hacking wrote of the "subversive" or "unintended effect of enumerating."[58] Counting requires categories, but such categories are, of course, neither given nor obvious. The emergence of race as a medical statistical fact, I would suggest, was precisely such a subversive result: with the attempt to impose order, new orders were unintentionally created. The statistical data that McGrigor would require ignored one category—essential to the healer—while military organization produced another, which would become embedded in medical logics from then on. The lesson for us all as we seek to produce our own data should be clear. We must be attentive to at least two elements: the information that we do not insert—which perhaps we should—and that which is inserted, without us realizing what we've done.

BURTON

Across the thought-provoking pieces in this conversation, there is general agreement that demographic data collection may be useful or even necessary as a first step toward transforming the history of science as a discipline. Later in this conversation, Emily Merchant states clearly what several of us suggested: "we can only intervene in what we know." But in equal measure, we all

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[56] A. M. Tulloch, *Statistical Report on the Sickness, Mortality, and Invaliding among the Troops in the West Indies* (London: W. Clowes and Sons, 1838); Tulloch, *Statistical Reports on the Sickness, Mortality, and Invaliding among the Troops in the United Kingdom, the Mediterranean, and British America* (London: W. Clowes and Sons, 1839); Tulloch, *Statistical Reports on the Sickness, Mortality, and Invaliding among the Troops in Western Africa, St. Helena, the Cape of Good Hope, and the Mauritius* (London: W. Clowes and Sons, 1840); and Tulloch, *Statistical Reports on the Sickness, Mortality, and Invaliding among Her Majesty's Troops Serving in Ceylon; the Tenasserim Provinces; and the Burmese Empire* (London: W. Clowes and Sons, 1841).

[57] Charles Darwin, *The Descent of Man, and Selection in Relation to Sex*, facsimile of 1st ed. (1871) (Princeton, N.J.: Princeton Univ. Press, 1981), p. 234.

[58] Ian Hacking, "Biopower and the Avalanche of Printed Numbers," *Humanities in Society*, 1982, 5:279–295, on p. 280.

present abundant evidence that the existing demographic categories at our disposal are inadequate and even potentially harmful owing to the historical contingencies that produced them. This is made particularly obvious in Wangui Muigai's account of U.S.-derived racial and ethnic categories, which HSS has used, for example, in its 2019 Annual Meeting Report. Meanwhile, the cases presented by Ahmed Ragab and Suman Seth raise important challenges to the notion that demographic data collection (especially in the form of readily quantifiable statistical categories) will serve the aims of increasing diversity and fostering inclusivity in the pages of HSS publications. At the core of their pieces lie uncomfortable questions about how we know what we know and why we value quantifiable ways of knowing diversity and inclusion problems, regardless of whether these ways of knowing can generate appropriate solutions.

Ragab calls us to task most directly: we already know that a problem exists. We know not because of counting or measuring that has already been done but because of the experiential knowledge expressed by the very scholars who are made to embody "diversity" for disciplines and institutions. These expressions are made as holistic evaluations of the field's climate—for example, the affirmation that "*Isis* is 'too white'" or, as Terence Keel mentions, the sensations of unease at HSS meetings despite the lack of "explicit animus." To insist on demographic statistics as the starting point of our interventions risks implying that this experiential knowledge is not a sufficient "measure of truth." This, of course, reproduces the Eurocentric model of extractive knowledge production that Ragab details in the historical case of Lucien Leclerc. No matter how benevolent its intentions, any statistical regime is an extractive project. Following the logic of categorical lists, experiential knowledge is only rendered valid and meaningful once the knower's identity has been extracted and classified according to a Euro-American white gaze. This dovetails with the observations in my own essay about the highly variable contextual identities of racialized people as they inhabit different professional and geographic locations. Similarly, the discipline's problems of climate and culture manifest in unquantifiable sensations of power dynamics. Accordingly, Ragab suggests that HSS abandon lists of quantifiable categories and conduct open-ended surveys that document experiential identities and knowledge.

Yet this solution poses new challenges: How should HSS publications handle open-ended confessionals of their members' identity? Who would have access to the information collected in such a survey, and how could individual privacy be maintained? Could this approach to counting without numbers ultimately add a disproportionate burden to the "diversity work" of marginalized scholars? Wrestling with these questions, I reflect on Seth's points about the unintended effects of counting. In his example of imperial British military medicine, racial categories initially emerged as statistical facts not because they were deliberately and explicitly enumerated but, rather, as a logistical by-product of military and social organization. Seth also warns us about the reductive work done by racial categories and statistics: the segregation of "black regiments" necessarily elided important variations in birthplace and "seasoning" climate, while also unintentionally creating new racial conglomerations analyzed for their disease susceptibility. Given our historical consciousness of these qualities of statistical data—their reductive power and their ability to produce information that was not asked for—I wonder whether HSS could make use of their subversive potential. As I suggested earlier, rather than working with contested identity categories, HSS could collect data on employment status, income level, current and past institutional affiliations and geographical residence, and native language. But I also wonder: In the aggregate, do these data points sufficiently capture the effects of racialized and gendered marginalization within our profession, such that they obviate the need to impose and count essentialized identities? Can we, like Seth's military statisticians, make data about race without asking for it? Could such an approach allow us to count, without reifying the same categories our work aims to unravel and without committing ourselves to a U.S.-centric model of corporate diversity management?

As Sebastián Gil-Riaño points out later in this conversation, while our universities are already embedded in such corporate discourses and strategies, we need not follow their preoccupation with counting, which transforms diversity work into a "box-ticking" exercise and bodies of color into "ticks in the boxes."[59] Ragab articulates the stakes of this approach: the very act of counting implies that we can reach a quantifiable point of "enough diversity." Accordingly, I return to my earlier point that the discipline's problems are not strictly quantifiable—and therefore neither should be the solutions. As an organization, HSS must decide whether collecting demographic data is worth the investment of time, energy, and funds that might be spent on other activities that directly foster inclusion.

With regard to improving the discipline's climate, both Keel and I gesture toward the everyday practices of editing and peer review. Keel provides examples of progress made in editorial evaluations of scholarship, which demonstrate the shifting value commitments of the history of science. I suggest that editors and peer reviewers reimagine what the "broad readership" of *Isis* looks like when evaluating the suitability of pieces for this field-defining journal. To contribute to their longer-term goal of diversifying the discipline, HSS can build from its own "Sponsor-a-Scholar" initiative to provide more direct publishing support to disadvantaged scholars, ameliorating the so-called leaky pipeline affecting the differential demographics of graduate students, tenure-track hires, and senior faculty. As a possible model, consider the "First Research Article" fellowships organized by the Max Planck Institute for the History of Science. These six-month fellowships provide stipends and an academic community to advanced Ph.D. students from Asian, African, and Latin American institutions, who spend their time in Berlin writing and preparing an article in English for journal publication.[60] Such a program may not seem a feasible alternative to counting the identities of HSS members or the authors of *Isis* submissions owing to its financial and logistical demands. But perhaps a transparent accounting of the organization's resources, as a quantifiable measurement of how far it is willing and able to go in support of disciplinary change, is the most necessary first step toward reparative action.

INTERLUDE: MUKHARJI

The interventions of Ragab, Seth, and Burton, I feel, crystallize around three general themes. These three themes might be described as those of *discipline*, *distance*, and *difference*. Ragab raises the issue of *discipline*. He points out that statistical lists of possible identities serve to *discipline* the range of possibilities of selfhood, expression, identification, and so forth into a manageable and predictable set of possibilities. The indexical charge placed on these identities then in turn allows a distribution of value and, by extension, a determination of what constitutes the proper history of science. The *disciplining* therefore limits not only the scholarly and biographical identities but also, more remotely, the epistemic boundaries of what might be studied.

This is a point worth dwelling on. It reminds us that if demographic diversity, with all the attendant ambiguities and problems of that phrase, is to have any ameliorative—let alone subversive—potential, it must not become a tool of co-optation by "populating the annals of Western or Western-like science with nonwhite nonmale bodies." This, as Ragab rightly iterates, will simply refurbish the status quo.

Seth raises the issue of *distance*. What, he asks, was the mystery sauce that converted the identities that emerge in face-to-face clinical interactions in colonial Ceylon into racialized statistical identities? It was *distance*. In London, halfway across the world from the beautiful island of

[59] Sara Ahmed, *On Being Included: Racism and Diversity in Institutional Life* (Durham, N.C.: Duke Univ. Press, 2012), p. 153.
[60] In previous years these were called "Get It Published" fellowships and were also open to applications from recent Ph.D.'s. I thank Charu Singh for bringing these fellowships to my attention.

Sri Lanka, the messier, more contingent, and mutable identities based on "seasoning" were both invisible and difficult to produce. But statistical abstractions were legible and tractable. In other words, they were *disciplined*. *Discipline* and *distance* thus mutually reinforce each other in the production of statistical identities. Susan L. Erikson, a medical anthropologist studying the production of health statistics in Sierra Leone, calls this "farcasting"—namely, the power of statistics to project in time and place. Interestingly, the term "farcasting" was itself used in the early modern era to speak of the power of magicians to extract knowledge and wealth from faraway places using demonic familiars.[61]

Identifying this natal link between statistical identities and distanced control does not of course mean that we should reject statistically "enumerated identities" *tout court* in favor of some more "fuzzy identities."[62] To do so would be to lapse into an ahistorical fantasy of return. This is where our third key theme, *difference*, comes into play—*difference* not merely in the sense of something that is disciplined and contained but, rather, as an ethical project. As Burton points out, whatever value the demographic project may or may not have, we have to think of alternatives that will tackle the "leaky pipeline" by which difference is leached off and diversity carefully curated in ways that sustain and reproduce existing patterns of privilege and consensus. Counting diversity, in other words, has to be wedded to a commitment to making our journal, our Society, and our field different.

Thus coupled, statistics could potentially play myriad allied roles in furthering that end. From Ragab's invocation of the performative role of data collection itself in interrupting the status quo to Burton's proposals to institute pragmatic initiatives that would allow scholars who are biographically, geographically, or epistemically excluded from our platforms to be welcomed onto them, our interlocutors show that demography sans an ethical commitment to engage difference is bound to be counterproductive. Burton's brilliant account of human difference in the Middle East demonstrates how blood group counting coexisted with several other technologically and materially distinct regimes for identifying difference, such as cranial indices and more specific mapping of particular genes.[63]

As we continue the conversation, we turn to the work of two scholars who delve further into the complex history of difference and demographic calculus. The conversation, we felt, would be enormously enriched by inviting the participation of scholars of race and gender who have, in their own research, looked directly at the ways in which institutional and material-technological elements have refracted the histories of human difference. Two scholars whose work immediately came to mind were Emily Merchant and Sebastián Gil-Riaño.

In their different ways, both open up the black box of demography. Delving into the details, they unravel the historical contradictions and subtle ironies that underwrite the diverse political possibilities engendered in historically specific demographic projects. Indeed, Merchant has provided us with an actual institutional history of American demography that maps the historical networks of patronage through which it acquired its particular set of interests in questions of fertility and birth control. In many ways, this American story both mirrors and also differs from the transition from state-led to professionally organized and at least partially private forms of

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[61] Susan L. Erikson, "Global Health Business: The Performance and Productivity of Statistics in Sierra Leone and Germany," *Medical Anthropology*, 2012, 31:367–384; and Lorraine Daston and Katharine Park, *Wonders and the Order of Nature, 1150–1750* (New York: Zone, 1998).

[62] The political theorist Sudipta Kaviraj argued that precolonial identities in South Asia were "fuzzy" until governmental techniques such as colonial censuses produced more clearly delineated, enumerated identities. See Sudipta Kaviraj, "Religion, Politics, and Modernity," in *Crisis and Change in Contemporary India*, ed. Upendra Baxi and Bhikhu Parekh (New Delhi: Sage, 1995), pp. 295–316.

[63] Burton, *Genetic Crossroads* (cit. n. 1).

demographic data collection that was happening elsewhere in the world in the interwar years.[64] But Merchant goes further into the workings of demography as a science. She is keenly attentive to the ways in which data is constructed and constrained. Her work has, for instance, demonstrated how the absence of a deeper, more coherent set of church records has propelled American historical demographers to focus on very different questions than those that animated most European demographers. Merchant's work also illuminates the ways that the very paucity of historical data is also pushing American demographers toward a greater embrace of computing technologies and the development of new databases.[65]

Gil-Riaño travels in a different direction but with equally illuminating and compelling insights. Whereas the vast majority of the scholarship on race looks to the production of raced identities and their mobilization, Gil-Riaño looks at the production of anti-racism. Delving into the history of the making of UNESCO's 1950 Statement on Race, he shows us that, by focusing too much on what the authors of the statement opposed, we have left largely unanalyzed what it was that they believed. Once we change our focus, we notice that their position on race was far from a clear-cut rejection of race. Instead, he has shown that the very scientists whom we have come to identify most with scientific anti-racism were in fact involved in a slew of late colonial, postcolonial, and international projects that operated with increasingly finely tuned notions of human difference.[66] Gil-Riaño's work provokes us to reconsider the genealogies of our own opposition to race and reflect on the ambiguities that remain embedded within the very reparative project within which the *Isis* demography initiative was first conceptualized.

Following the historical reflections by Merchant and Gil-Riaño, we continue with further responses by the rest of the contributors as they consider what the histories told throughout this conversation prompt us toward.

MERCHANT

As we have already read, *Isis* is developing a mechanism for surveying prospective authors, as they submit their manuscripts, in order to collect demographic data about everyone who hopes to publish in the flagship journal of the History of Science Society. As I understand it, the Editors plan to use this data to identify any systematic differences between the characteristics of those who submit to the journal and those who end up getting published in the journal, so that these differences can be addressed. The Editors also hope that the very act of surveying those who submit manuscripts will enhance the diversity of journal authors and even of the history of science as a field. It seems to me that data alone can't promote or ensure diversity among *Isis* authors. What will matter is what is done with the data.

Diversity is critical to the history of science, not just for the obvious moral reasons, but also for epistemological reasons. Feminist science scholars have demonstrated that all potential knowers are embodied, so all knowledge is situated. Everything seen is seen from a particular vantage point. If we hold science to the standard of "strong objectivity," which relies not only on multiple perspectives but on privileging the perspectives of those who lack traditional forms of power in society, we must insist on the same standard in our own discipline, beginning with our most prominent journal.[67]

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[64] Merchant, "Digital History of Anglophone Demography and Global Population Control, 1915–1984" (cit. n. 4).

[65] Emily Klancher Merchant and J. David Hacker, "Historical Demography in the United States," in *A Global History of Historical Demography*, ed. Antoinette Fauve-Chamoux, Ioan Bolovan, and Sølvi Sogner (Bern: Lang, 2016), pp. 655–670.

[66] Gil-Riaño, "Relocating Anti-Racist Science" (cit. n. 2).

[67] Donna Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," *Feminist Studies*, 1988, *14*:575–599, https://doi.org/10.2307/3178066; and Sandra Harding, "After the Neutrality Ideal: Science, Politics, and 'Strong Objectivity,'" *Social Research*, 1992, 59:567–587, https://www.jstor.org/stable/40970706.

Journals have long played a major role in creating and perpetuating epistemic communities and in leveraging the power of those communities to advance individual academic careers. Diversity in top-level journals can thus promote diversity in the fields for which they serve as gatekeepers, and *Isis* certainly has the power to do that for the history of science. As computational textual analysis becomes more accepted as a research tool in the history of knowledge production, we have a new reason to attend to diversity in journal publishing. Journals not only build epistemic communities but have also come to *represent* them.[68] Computational analysis of the history of the history of science could very well take the *Isis* corpus as emblematic of the field and use the record of *Isis* authors in place of a roster of the field's practitioners. As readers of this journal are well aware, such representations of the history of science may in turn influence the practice of history of science itself.[69]

That said, will collecting demographic data on manuscript submissions increase the diversity of authors in *Isis* and, by extension, the diversity of the history of science? The question of whether we can "survey our way to cultural change" implicitly acknowledges the fact that data collection is never neutral and that people interact with the systems that attempt to classify them.[70] But although the purposes for which data is collected always shape the data itself, they do not overdetermine data analysis.

The U.S. Census provides a vivid example. Until the passage of the Civil Rights Act in 1964, racial classification in the census generally served discriminatory purposes. How specific individuals are listed in the census typically makes little difference in their own lives. Our census entries do not become identification cards that we must carry in our wallets, and the information recorded in the census remains confidential for seventy-two years. Nonetheless, how the census classifies people in the aggregate has a strong effect on the life chances of people identified with particular racial categories or living in places with large nonwhite populations. The census identifies who lives where; census data informs the drawing of Congressional and other voting districts, the location of polls, the siting of various social goods (schools, parks, etc.) and environmental bads (freeways, landfills, industrial plants, etc.). During World War II, this data also facilitated the targeting of Japanese Americans for incarceration.[71]

Prior to the mid-1960s, the categories used in the census determined who would be eligible for unfettered citizenship and who would be subject to segregation or barred from immigration or naturalization. In the 1920 census the U.S. government added a "Hindu" category to the race question. Three years later, the Supreme Court ruled in *United States v. Bhagat Singh Thind* that immigrants from South Asia were racially ineligible to naturalize (the Naturalization Act of 1870 limited immigration to "white" persons and persons of African descent).[72] When the census added a "Mexican" category to the race question in 1930, Mexican-American civil rights groups, backed by the Mexican government, protested because they feared that such classification would legitimize the segregation Mexican Americans already experienced in some parts of

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[68] See, e.g., B. R. Erick Peirson, Erin Bottino, Julia L. Damerow, and Manfred D. Laubichler, "Quantitative Perspectives on Fifty Years of the *Journal of the History of Biology*," *Journal of the History of Biology*, 2017, 50:695–751, https://doi.org/10.1007/s10739-017-9499-2; and Merchant, "Digital History of Anglophone Demography and Global Population Control, 1915–1984" (cit. n. 4).

[69] Barry Barnes, "Social Life as Bootstrapped Induction," *Sociology*, 1983, 17:524–545, https://doi.org/10.1177/0038038583017004004.

[70] Ian Hacking, "Making Up People," in *Reconstructing Individualism: Autonomy, Individuality, and the Self in Western Thought*, ed. Thomas C. Heller, Morton Sosna, and David E. Wellbery (Stanford, Calif.: Stanford Univ. Press, 1986), pp. 222–236.

[71] William Seltzer and Margo Anderson, "The Dark Side of Numbers: The Role of Population Data Systems in Human Rights Abuses," *Soc. Res.*, 2001, 68:481–513, https://www.jstor.org/stable/40971467.

[72] Ian Haney López, *White by Law* (New York: NYU Press, 1996).

the country and pave the way to restrictions on immigration. The protesters succeeded, leading to the removal of the "Mexican" category in the 1940 census and the instruction that Mexican immigrants and their descendants were to be classified as "white."[73]

After the passage of the Civil Rights Act of 1964, census data on race became a tool for the enforcement of anti-discriminatory measures, and classification created categories to be protected rather than categories to be systematically disadvantaged. Immediately, the calculus of classification changed, and groups that had previously sought to be designated "white" now sought the protections afforded by nonwhite status. In light of earlier struggles over race classification, the federal government determined in 1977 that Mexican Americans and those with ancestry from other Spanish-speaking countries were to be protected on the basis of Hispanic ethnicity, rather than nonwhite race.[74] Completing the construction of the new "ethnicity" concept, the census added a question in 1980, asking whether each individual was "of Spanish/Hispanic origin or descent." This ethnicity question was separate from the race question, where the options included only "White, Black or Negro, Japanese, Chinese, Filipino, Korean, Vietnamese, Indian (Amer.), Asian Indian, Hawaiian, Guamanian, Samoan, Eskimo, Aleut, and Other." The new ethnicity designation fostered the construction of Latinx identity and the emergence of a Spanish-language media market.[75] It does not, however, fully accord with the racial self-identification of many Latinx people, who routinely select the "other" category on the census's race question rather than identifying as "white."

The fragility of the shift from data-driven discrimination to data-driven protection and the continued dangers of data surveillance were exposed by the proposal to add a citizenship question to the 2020 census. Such a question would have stymied the collection of data about individuals in protected racial and ethnic categories, thereby rendering that data incapable of promoting civil rights, equitably distributing federal funds, and ensuring proportional representation in government.[76]

As institutions apply data-driven forms of problem solving to more and more domains, they find that data science is very effective at perpetuating historical forms of discrimination. Using data to remedy past wrongs, however, requires approaches that are typically not included in the data science curriculum—specifically, approaches informed by the humanities and social sciences.[77] As far as I know, *Isis* is not planning to turn editorial decisions over to an algorithm, and the journal's Editors are committed to using the data they collect for good. The point is simply that the same data can be used for a multiplicity of purposes, and beneficence in the intent behind data collection does not necessarily ensure beneficence in data analysis or in the uses to which analysis is put.

If the History of Science Society is committed to promoting diversity, data collection is an important first step: we can only intervene in what we know.[78] But data collection is just that—the first

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[73] Gratton and Merchant, "*La Raza*" (cit. n. 4).

[74] Kenneth Prewitt, *What Is Your Race? The Flawed Effort of the Census to Classify Americans* (Princeton, N.J.: Princeton Univ. Press, 2013). Since the Office of Management and Budget's 1977 Statistical Directive Number 15, the census has asked two questions, one on ethnicity (Hispanic or not) and the other on race. Hispanic individuals who do not also identify as African American, Native American, Asian American, or Pacific Islander are expected to choose "white" on the race question.

[75] https://www.census.gov/history/pdf/1980_short_questionnaire.pdf; and G. Cristina Mora, *Making Hispanics: How Activists, Bureaucrats, and Media Constructed a New American* (Chicago: Univ. Chicago Press, 2014).

[76] Emily Klancher Merchant, "Democracy Is in Danger When the Census Undercounts Vulnerable Populations," *Conversation*, 29 Mar. 2018, https://theconversation.com/democracy-is-in-danger-when-the-census-undercounts-vulnerable-populations-93027.

[77] Cathy O'Neil, *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy* (New York: Broadway, 2016); and Safiya Umoja Noble, *Algorithms of Oppression: How Search Engines Reinforce Racism* (New York: NYU Press, 2018).

[78] Catherine D'Ignazio and Lauren Klein, *Data Feminism* (Cambridge, Mass.: MIT Press, 2020).

step. On its own, *Isis*'s survey probably won't promote the kind of cultural change the Editors hope to see. Given that the data will be collected at the point of manuscript submission, the act of data collection is unlikely to influence who submits manuscripts. Instead, cultural change will depend on what is done with the data. If the journal is going to collect demographic data from potential authors, the Editors must have a plan in place to ensure that the data is used to the end for which it is collected: promoting, or at the very least auditing, diversity in the journal and in the history of science more broadly.

SEBASTIÁN GIL-RIAÑO

According to the Lebanese-Australian anthropologist Ghassan Hage, it is now time to begin "recalling anti-racism." In making this case Hage plays on the multiple meanings of the verb "to recall." In one sense, recalling anti-racism means remembering the purpose and functions it has historically served. Yet Hage—echoing Bruno Latour—also has another meaning of "recall" in mind. "Recalling" also refers to instances when a company "recalls" a defective product and aims to restore public trust by showing "the care it takes with the quality control of its goods and the safety of their users."[79] In proposing that anti-racism be similarly "recalled," Hage's main concern is that it has "often failed to perform and rise to the situations it is confronting." Anti-racism's poor performance stands in contrast to that of racism, which Hage argues has been through several "recalls" that have made it "operationally suitable for a variety of socioeconomic and cultural environments." Anti-racism, argues Hage, has become "conceptually rather ossified" and is thus "always trying to catch up with the racists' fluid modes of classification."[80]

It is in the spirit of Hage's urge to recall anti-racism that I want to historicize the conceptions of diversity that we have been asked to discuss in this forum. Having a better portrait of the demographic diversity within our profession is a necessary and laudable goal. Yet in this essay I question whether tracking demographic diversity alone is operationally suited to confronting the multiple forms of racism that we as a profession encounter. Indeed, the genealogy this essay traces explains, in part, why those who study "diversity" have come to criticize it as a stand-in term when open discussion of race is too controversial or "when white people find the topic of race uncomfortable."[81] With a nod to Hage's provocation, this essay traces a genealogy of "diversity" in the human sciences and offers some thoughts on how it might be effectively recalled.

The concept of demographic diversity invoked for this conversation emerged from the reformulations of race in science during the 1950s. Indeed, the term "demographic diversity" harkens back to the period after World War II when the human sciences attempted to reestablish their moral authority by cleansing their disciplines of overly political conceptions of race and opting instead for the seemingly benign and apolitical language of "population."[82] Scientists' adoption of "population" as a preferred concept in several disciplines, including human biology, physical anthropology, demography, and development economics, was propelled by a desire to distance the study of human diversity from Nazi eugenics. Yet as it was operationalized in the context of the Cold War and decolonization, "population" became tied to neo-Malthusian projects that sought to curtail the reproduction of brown and black lives in the name of fiscal responsibility

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[79] Ghassan Hage, "Recalling Anti-Racism," *Ethnic and Racial Studies*, 2016, 39:123–133; and Bruno Latour, "The Recall of Modernity: Anthropological Approaches," *Cultural Studies Review*, 2007, *13*:11–30, on p. 11.

[80] Hage, "Recalling Anti-Racism," p. 125.

[81] Ellen Berrey, "Diversity Is for White People: The Big Lie behind a Well-Intended Word," *Salon*, 26 Oct. 2015.

[82] Jenny Reardon, *Race to the Finish: Identity and Governance in an Age of Genomics* (Princeton, N.J.: Princeton Univ. Press, 2009); Michael Yudell, *Race Unmasked: Biology and Race in the Twentieth Century* (New York: Columbia Univ. Press, 2014); Joanna Radin, "Ethics in Human Biology: A Historical Perspective on Present Challenges," *Annual Review of Anthropology*, 2018, *47*:263–278; and Gil-Riaño, "Relocating Anti-Racist Science" (cit. n. 2).

and legitimated the collection of blood and tissues from the bodies of indigenous peoples conceptualized as isolated and thereby primitive. It is this racialized biopolitics that reveals how, as Michelle Murphy argues, "race is the grammar and ghost of population."[83]

The rejection of racial typologies after World War II also left the social sciences with a weakened framework for confronting racism. As the anthropologist Kamala Visweswaran forcefully argues, the rejection of biological race led anthropologists to adopt "culture" as a seemingly neutral way of describing human differences. Yet instead of rethinking the hierarchies once attributed to biological differences, anthropologists adopted culture as a substitute concept that was increasingly "asked to do the work of race." Indeed, it was in this context that anthropologists adopted concepts like "cultures of poverty," which attributed socioeconomic inequality to deep-seated cultural differences. In a similar vein, sociological studies of race relations from the 1950s increasingly displaced approaches that linked racial prejudice to systemic and structural causes. Instead, race relations research from this period attributed race prejudice to individual attitudes and biases and turned to social psychology in search of tools for engineering racial tolerance.[84]

It was in the context of this racial liberalism that multiculturalism emerged as a mainstream anti-racist framework. Multiculturalism proved alluring for Western nation-states. It offered a set of institutional policies centered on respect for cultural identity that nevertheless did not commit nations whose history was shaped by indigenous dispossession, slavery, immigration restriction, and colonial plunder to deep systemic changes or economic reparations. Taking their cue from UNESCO's approach to anti-racism, multicultural theorists also conceptualized racism as an aberration external to democratic states, as opposed to something internal to their historical development.[85] Thus, even as it offered a framework for celebrating cultural diversity and for attempting to balance the competing political demands of demographically diverse societies, multiculturalism evaded direct confrontation with structural racism.

As multiculturalism blossomed in the late 1970s and 1980s, North American corporations discovered anthropological conceptions of "culture" and developed programs for managing diversity within their ranks. Indeed, "diversity management" became the major vehicle through which corporations adapted to a rapidly changing demographic and geopolitical landscape. Self-styled diversity practitioners, such as the Harvard Business School graduate R. Roosevelt Thomas, Jr., championed "diversity management" as a flexible alternative to rigid affirmative action policies, which they saw as destined to die a "natural death." As an alternative to conforming to juridically mandated affirmative action policies, "diversity management" offered corporations a means of engineering managerial cultures ostensibly committed to the anti-racist principles of affirmative action.[86] Further, as Kira Lussier has shown, demand for diversity management prompted computer companies to team with consulting psychologists to produce "diversity-training" seminars, videotapes, and manuals to help corporate managers develop their capacity to interact across differences.[87]

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[83] Michelle Murphy, *The Economization of Life* (Durham, N.C.: Duke Univ. Press, 2017), p. 135. See also Emma Kowal, Joanna Radin, and Jenny Reardon, "Indigenous Body Parts, Mutating Temporalities, and the Half-Lives of Postcolonial Technoscience," *Soc. Stud. Sci.*, 2013, *43*:465–483.

[84] Kamala Visweswaran, "Race and the Culture of Anthropology," *American Anthropologist*, 1998, *100*:70–83, on p. 76; and Leah N. Gordon, *From Power to Prejudice: The Rise of Racial Individualism in Midcentury America* (Chicago: Univ. Chicago Press, 2015).

[85] Alana Lentin, "Replacing 'Race,' Historicizing 'Culture' in Multiculturalism," *Patterns of Prejudice*, 2005, 39:379–396.

[86] Avery Gordon, "The Work of Corporate Culture: Diversity Management," *Social Text*, 1995, *44*:3–30; and Ellen Berrey, *The Enigma of Diversity: The Language of Race and the Limits of Racial Justice* (Chicago: Univ. Chicago Press, 2015).

[87] Kira Lussier, "Personality, Incorporated: Psychological Capital in American Management, 1960–1995" (Ph.D. diss., Univ. Toronto, 2018).

In universities, corporate approaches to diversity gained popularity in the 1990s and early 2000s amid calls for greater inclusion on the basis of race and gender. Yet instead of committing institutions to systemic change, diversity policies became marketable objects for presenting them as having banished racism or having strategies in place to manage racial and gender identities. In universities, as Sarah Ahmed has shown, this celebratory conception of diversity often resulted in a form of anti-racism commitment that is "nonperformative" insofar as it does not entail action beyond box-ticking.[88]

The project of collecting data on the diversity of *Isis* authors is arguably part of this same anti-racist genealogy. Even if it does not make our discipline more diverse, *post hoc* collection of data can potentially help us develop strategies for increasing diversity in meaningful ways. Collecting data is a useful starting point. Yet it leaves the more challenging task of figuring out how we want our profession to face up to the tactical mobility of racism. Given the historical whiteness of our discipline and its privileging of Western science, committing to diversity also entails confronting our profession's colonial roots. Thus, *Isis* might consider following the *American Historical Review*, which recently took the risk of confronting its own "potential complicity" in the history profession's past lack of openness "to scholars and scholarship due to race, color, creed, gender, sexuality, nationality, and a host of other assigned characteristics."[89] The *AHR* has chosen to frame this project in decolonial terms. What would decolonizing *Isis* and the History of Science Society entail?

RAGAB

The questions that prompted these interventions and this conversation centered on the value of collecting demographic information from *Isis* authors and the best way to conduct such a process. In their interventions, Emily Merchant and Sebastián Gil-Riaño offered important insights that explored the history of demographic and diversity-related statistics. Gil-Riaño showed how concepts of demographics and populations came to replace narratives of race difference and how the concept of culture replaced race-based essentialism with cultural categories that also sought to explain and generalize. Through analyzing the history of the U.S. Census and the evolution of race categories, Merchant explained how enumerating and counting race categories played an important role in enforcing specific immigration policies and discriminatory regimes. Gil-Riaño's and Merchant's narratives raise important questions about the legacy of statistical approaches to race and diversity. Gil-Riaño commences his intervention with a consideration of the need to "recall anti-racism"—"recalling," as in remembering, but also as in the need to refit anti-racism to meet new realities of racism and exclusion. This echoes Merchant's doubts about our ability to survey our way to diversity. Gil-Riaño explains that a neoliberal focus on surveying and on diversity through representation functions in many cases as an alternative to a more robust anti-racist discourse—one that is more palatable to whiteness. In the same vein, Merchant's intervention demonstrates that there is nothing simple, factual, or transparent about data collection. Collections and surveys create categories and serve specific agendas.

While both Gil-Riaño and Merchant offer their support to the collection of demographic data (as do I), explaining, to cite Merchant, that "we can only intervene in what we know," their interventions push us to distinguish the ontologies, epistemologies, and teleologies embedded in such attempts at collection. Both Gil-Riaño and Merchant insist that surveys and data collections do not represent or portray an ontology that exists outside of these surveys—there is no real race or ethnicity that is independent of our gaze. Instead, surveys create ontologies of identity that rely

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[88] Ahmed, *On Being Included* (cit. n. 59).

[89] Alex Lichtenstein, "Decolonizing the AHR," *Amer. Hist. Rev.*, 2018, *123*(1):xiv–xvii.

on the epistemic logic of surveying. Such logic is in turn propped up by a belief in (or silent consent to) the coherence and uniqueness of the categories to be measured. But such logic is inherently teleological. In absence of a real ontology to be surveyed, the categories surveyed, studied, and analyzed are therefore produced to serve a particular teleology, be it discrimination, racism, deportation, or enhancing diversity. It is therefore more appropriate to engage with the epistemology of surveying not from the starting point of ontology (Will surveys show us the real nature of our community? What are the right categories to list? Will these categories translate well across different contexts?) but, rather, from that of teleology (What do we hope to achieve by surveying?). This teleological approach would allow us to measure the effectiveness of these surveys without assuming that they represent an ontology we desire to uncover. Merchant concludes, "If the journal is going to collect demographic data from potential authors, the Editors must have a plan in place to ensure that the data is used to *the end* for which it is collected" (emphasis mine).

While the epistemological investigation under consideration (surveying) is indeed bereft of a sustaining ontology, its teleology is not. Indeed, the teleology behind this investigation (promoting diversity in *Isis*) is justified by a well-reasoned perception of the overwhelming whiteness of our field. It is at this entanglement of knowledge, existence, and aims that, I believe, the demographic data quest spins its wheels. If the investigation is intended simply to reveal that the field is too white, then asking about whiteness should suffice. But if the investigation intends to enhance the diversity of publications in *Isis*, or of the field as a whole, then such investigation must either assume such whiteness, therefore allowing for this teleology to come into being, or assume a race-based ontology that harks back to scientific racism, which I believe is not what the Editors have in mind. In this view, the teleology of this investigation should be framed not in the context of diversity but, rather, in clearer and more concrete terms: in relation to whiteness and white-centrism. Gil-Riaño's intervention faces us with the white discomfort around discussing racism and whiteness and invites us to consider anti-racism rather than diversity as the goal to be recalled.

If indeed the goal of this epistemological endeavor is to intervene in the ontology of white dominance, and of white-centrism in the field, then the investigation needs to transcend the counting of the bodies of authors (vestiges of an ontology of race), instead counting their identification (a function of communications and attentiveness around other identities, as José Esteban Muñoz offers) and counting their contributions (a function of white-centrism in our research that all but masks and facilitates the field's overall whiteness). To follow Merchant's call for clear ends, it is important to couple such an investigation with the actions that it will inform even before it is embarked on. In other words, this investigation should not intend to prove that the field is too white or that it lacks sufficient diversity. This is because such conclusions are well known, apart from a particular subset of white gazes. To dedicate the journal's resources to this subset is therefore an act that prioritizes this subset of white gazes. For the rest of us, the field's whiteness and its need for diversity are evident. As mentioned before, the investigation is not exploratory of an ontology but, rather, introductory to teleology. In the same way that the underlying hypothesis (assumed ontology) behind a survey needs to be clear in its design, the underlying teleology behind this investigation needs to be clear and needs to inform its design.

If the goal is to "color" or de-white *Isis*, then this investigation needs to focus on the various aspects of white-centrism. This means that we need to investigate not only the identities of authors (which Merchant, Gil-Riaño, and I support) but also, I propose, the regions they study and the epistemologies they focus on. Similarly, it is important to intervene in some of the underlying causes behind such white-centrism, such as existing structures of mentorship that traditionally favor white students, scholars, and topics. *Isis*, therefore, needs to use such investigations to hold intentional workshops and boot camps that address specific topics, periods, and regions,

where more senior scholars are invited to mentor and support younger scholars and help them publish. *Isis* should also consider partnering with various centers and university-based initiatives to create an alternative pipeline that allows for more "diverse" works to be submitted. Centering the teleology, as Gil-Riaño and Merchant invite us to do, will allow the impact of this survey to extend beyond *Isis* to the entire field and will further *Isis*'s role in leading, not only representing, the field.

KEEL

Our debate over whether to study the diversity of the field, and the potential dangers in such a task, calls to mind the thoughts of the anthropologist Ashley Montagu, who famously wrote in the 1950 UNESCO Statement on Race: "[The] best we can do at the present time is to describe populations, and while our classifications may be interesting, we must be careful not to take them too seriously." The point is to avoid becoming either the caretakers or the captives of our own arbitrary classificatory schemes. Montagu's observations were prescient, as we continue to be responsible for and tethered to the people we create through science and our scholarship. What he did not consider, however, is that who and how we classify reflects what we value. In the United States, as Eddie Glaude, Jr., has made clear in *Democracy in Black*, our value commitments are often prisoners of the belief that white bodies are worth more than others.[90] Keeping in mind that our values may carry as much shadow as they do light, classification is also a declaration about the value of the objects or people we invent. Thus, considering what Montagu did not anticipate, I would like to begin my response by citing Ahmed Ragab's insightful analysis, which calls into question the epistemic commitments potentially underwriting our current desire to survey the demographic makeup of our field. In his description of Western scholarly accounts of Islamic medicine—which is characterized by a Golden Age and then a precipitous decline—Ragab identifies what he calls an "extractive economy" that motivates this declension narrative and is omnipresent within the field of history more broadly. By "extractive economy," he means an intellectual response to (colonial) market forces that engenders by necessity "a system of worth that governs which names, details, and centuries are worthy and which are not." This extractive economy sets the terms for the politics of recognition, whereby a predetermined category of person is understood to be of value for the white scholarly gaze. Drawing on the history of Islamic medicine, Ragab finds that interest in diversity does not upend the fundamentally extractive economic commitments that seek to integrate nonwhite and nonmale bodies into an intellectual system that works fundamentally against such people. From this vantage point, demographic diversity is meaningful according to a preestablished set of parameters that do not fundamentally change the practice of extracting value from nonwhite nonmale bodies and non-Western subjects. Ragab's insights here are echoed in Sebastián Gil-Riaño's essay, which argues that the failure of UNESCO was its promotion of multiculturalism that "evaded direct confrontation with structural racism."

Ragab and Gil-Riaño both speak to the unfinished business of decolonializing the Western scholarly imagination and the historical practices of ordering knowledge and bodies in the service of a singular and evolving story of scientific thought and human cultural progress. They are both surely right to note that historians of science operate under and with the white gaze; science has been a tool for European domination, undermining non-Western ways of being and positioning whiteness as the ideal human form over (nonscientific) others. Wangui Muigai's essay makes this brilliantly clear as she notes how southern government officials extracted knowledge about

[90] Ashley Montagu, *Statement on Race* (New York: Schuman, 1951); and Eddie Glaude, Jr., *Democracy in Black: How Race Still Enslaves the American Soul* (New York: Broadway, 2017), p. 6.

black birth and mortality from midwives to fit a predetermined set of political and ideological commitments designed to sustain whiteness, undermine the scientific authority of midwives, and ultimately threaten the life chances of future black babies through Virginia's 1924 racial integrity act.

While I stand in full agreement with the insights of Ragab, Gil-Riaño, and Muigai, I must point out that the racial, ethnic, gender, and religious makeup of the scholars in this Open Conversation reveals the paradox of our current situation: nonwhites, non-Christians, and nonmales, having ascended into the profession of historical scholarship, have also become the stewards, beneficiaries, and targets of the most dangerous aspects of this tradition. We now have the task of making this inheritance ours as scholars of science with the burden of knowing that we will inevitably reproduce aspects of an intellectual regime that turned our ancestors into nonwhite, non-Western, and nonscientific "others." I believe this is not a hopeless situation: we can use the tools of our troublesome inheritance to survey the practices of our profession to assess if, where, and how this reproduction is taking place.

A study of this kind is likely to create unsettling knowledge about the continued effects of structural racism and gender discrimination within the field. The burden of this awareness, I contend, is what distinguishes the scholar of science from the scientists we study and thus reveals the importance of the subject positions of the intellectuals in our field. Diversity in our profession—as a discipline capable of engendering historical consciousness and self-awareness—can be valuable as a means toward decolonizing the profession and confronting structural racism. Unlike the scientists we study, our task as historians is to disclose the social and political conditions that produce the people and ideas that make up our subject. Included within the field, of course, are the historians who write about science. Demographic diversity does not, by necessity, need to be in the service of the status quo—despite the long track record of such efforts, as my colleagues have so carefully noted in this conversation. Knowledge created by a demographically diverse group of scholars can work against complacency and the reification of privileged truths within our profession and within science more generally.

Let me return to the creation of the African Eve hypothesis to illustrate how historians committed to intellectual and demographic diversity can be self-reflective in ways that scientists typically cannot. The work of Rebecca Cann and her colleagues produced a form of scientific knowledge that gave a value to African ancestry that explicitly worked against the racist commitments of many biologists seeking to make Europe the mother of modern humans. The African Eve hypothesis also offered a form of scientific knowledge that undermined the eugenic commitments at the heart of most of the racial science produced during the first half of the twentieth century—including, of course, the ideas that supported Virginia's 1924 "Act to Preserve Racial Integrity." Despite this move to humanize African ancestry, indigenous scholars and critical race theorists within the profession have documented the way the African Eve hypothesis remains a scientific theory that reproduces the colonial legacy of Western science by offering a universal account of human beginnings that undermines indigenous and non-Western intellectual systems that do not believe all humans come from a single geographic region.[91] Ragab's, Gil-Riaño's, and Muigai's skepticism about the danger of Western acts of inclusion is thus not misplaced; it is precisely critical orientation of this kind that keeps our profession from becoming

[91] Kim Tallbear, "Genomic Articulations of Indigeneity," *Soc. Stud. Sci.*, 2013, 43:509–533; Sylvia Wynter and Katherine McKittrick, "Unparalleled Catastrophe for Our Species? or, To Give Humanness a Different Future: Conversations," in *Sylvia Wynter: On Being Human as Praxis*, ed. McKittrick (Durham, N.C.: Duke Univ. Press, 2015), pp. 9–89. See also Maile Arvin, *Possessing Polynesians: The Science of Settler Colonial Whiteness in Hawai'i and Oceania* (Durham, N.C.: Duke Univ. Press, 2019), pp. 179–181.

merely an extension of scientific truth—which is to say an unfiltered reproduction of the contemporary and historical forces that generate scientific knowledge.

On this point I do not think my colleagues would disagree. Writing in the wake of the intellectual victories of the New Left, we are no longer obligated to create knowledge in the service of progressivism, driven by the hope that science and reason will emancipate us from the dangers of the past.[92] Such utopian thinking is an intellectual dead end with a remarkable capacity to produce complacent liberals and self-righteous traditionalists when efforts to confront structural racism inevitably meet setbacks and failure. It takes tremendous nerve and optimism to be committed to social change while remaining agnostic about progress and human emancipation. For those willing to accept it, this is the burden of our troublesome inheritance.

If *Isis* decides to survey the field, we should anticipate the shortcomings, failures, and even dangerous knowledge creations that this symbolic representation of diversity will create. Fear of such failure, however, is not a compelling reason to refuse to collect this information. If we choose not to study the field—to produce knowledge about where we stand in relation to the social revolution of the 1960s—I can't help but think that this will be a victory for a faction of the Left that believes we have gone far enough and for traditionalists who were opposed to social change to begin with. It would also be a victory for those who prefer to be scientists and not historians.

GIL-RIAÑO

I want to return to the original question posed: Can a journal or discipline "survey its way to cultural change"? I am intrigued by the word choice here. To my ears, "cultural change" implies a gradual, incremental, and decidedly cautious approach—the kind of change that happens imperceptibly and seeks to preserve the comfort and stability of those involved.

I am struck by this choice of terms because it was also one favored by many of the actors I follow in my work on anti-racism in the social sciences after World War II. Firmly opposed to the idea of static racial hierarchies, many cultural anthropologists after World War II believed that they could use their expertise for the purpose of changing the culture of so-called primitive groups. Indeed, during the Cold War cultural anthropologists spearheaded modernization projects that aimed to curtail the possibility of communist revolution in the "third world" by engineering reforms to the cultural habits and values of "nonmechanized" groups and, if all went well, setting them on a path to capitalist modernity. Anthropologists justified their participation in modernization projects on the basis that "primitive" people tended to have cultures with intricately balanced traditions, values, and social structures. Radical changes to the finely tuned cultures of "primitive" peoples, they argued, might produce devastating and disorienting results. Indeed, as Margaret Mead wrote in *Cultural Patterns and Technical Change* (1953), a UNESCO field manual for technical assistance practitioners: "it is possible to say that under situations of stress and strain, of rapid change and consequent disorientation, there is likely to be an increase in manifest mental ill health." During the Cold War, social scientists and technocrats thus wielded cultural change as a mechanism for bypassing politics in the name of mental health. As such, they seamlessly integrated the language of cultural change into the kinds of development projects that James Ferguson has aptly called "anti-politics machine[s]."[93]

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[92] Michel Foucault, "Nietzsche, Genealogy, History," in *The Foucault Reader*, ed. Paul Rabinow (New York: Pantheon, 1984), pp. 76–100. For a recent study that follows Edward Said's critical insights about the progressivism promoted by the Frankfurt School see Amy Allen, *The End of Progress: Decolonizing the Normative Foundations of Critical Theory* (New York: Columbia Univ. Press, 2017). See also Edward Said, *Culture and Imperialism* (New York: Vintage, 1993), pp. 278–279.

[93] Margaret Mead, *Cultural Patterns and Technical Change: A Manual* (Paris: UNESCO, 1953), p. 12; and James Ferguson, *The Anti-Politics Machine: "Development," Depoliticization, and Bureaucratic Power in Lesotho* (Cambridge: Cambridge Univ. Press, 1990).

Given this history, I was surprised to see "cultural change" in the prompt that we were asked to respond to—all the more so given that "revolutions" figure so prominently in the historiographic traditions of our discipline(s). I can't help but wonder how different this conversation would look if "revolution" were swapped for "cultural change." Yet even though we were not explicitly asked to consider the possibility of revolution, many of the essays hinted at the need for major systemic—or perhaps revolutionary?—changes within our discipline.

For instance, in her thought-provoking essay Elise Burton offers a compelling historical case study that illustrates why surveys cannot be counted on to enact cultural change. Burton presents a compelling synopsis of Middle Eastern people's hard-fought efforts to be included in the European race and the unintended consequences of this campaign for Middle Eastern immigrants to the United States. She convincingly shows how the racial category of white or "Caucasian" concealed, or whitewashed, the cultural and linguistic diversity of Middle Eastern immigrants while doing little to protect them from racial discrimination fueled by international political events. For Burton's actors, it seems as though categorical tinkering generated as many problems as it solved. In the end, the projects of racial categorization that Burton describes seem to amount to no more than rearranging the deck chairs on a sinking ship. Thus, instead of expecting cultural change to arise from new statistical regimes, Burton points to a more pressing problem within our discipline—how to promote geographic diversity of topics in a field dominated by Europeanists and Americanists. In other words, what changes have to be made so that the majority of our membership views geographies beyond North America and Europe as essential parts of "the history of science canon," as opposed to niche specialties for those with sophisticated palates?

Burton's views were shared by many other contributors. Indeed, several essays suggest that we have inherited a discipline whose archival, institutional, and epistemological moorings remain anchored in Western Europe and North America. For instance, Ahmed Ragab identifies an "extractive economy" derived from colonial markets that structures the current state of our discipline. For Ragab this structure is in direct tension with efforts to diversify our discipline. Indeed, Ragab argues, efforts to populate histories of "Western or Western-like science with nonwhite nonmale bodies" and to change the racial and gendered composition of our discipline do little to change this extractive economy and are better understood as reparative efforts conditioned by the "desire to repair, fix, and maintain inherited archives." Similarly, Terence Keel suggests that producing significant change implies a direct confrontation with the structures we inherit. "What creates change," Keel writes, "is asking different questions, which typically happens when interested parties begin to examine the inheritance that shapes the ideas and theories at their disposal." For Keel, demographic surveys may reveal the effects of previous political struggles but not necessarily change our historical consciousness.

I am in full agreement with my colleagues' thoughtful diagnoses concerning our discipline's structural problems. Yet I would like to conclude this reflection with a brief example of how even Cold War projects of cultural change yielded unexpected demographic outcomes. One of the most spectacular projects of "cultural change" from the Cold War period was the Cornell Vicos project in Peru. The Vicos project was an ambitious modernization experiment generously funded by the Carnegie Corporation. Using Carnegie funds, Cornell University's Department of Sociology and Anthropology purchased a neglected hacienda in the highlands of Peru that housed some two thousand "Indian" serfs who became test subjects in an applied anthropology project that aimed to engineer "cultural change."[94] The Vicos project serves as a striking example of how the rhetoric of "cultural change" masked U.S. imperial pretensions during the Cold War.

[94] Jason Pribilsky, "Development and the 'Indian Problem' in the Cold War Andes: *Indigenismo*, Science, and Modernization in the Making of the Cornell-Peru Project at Vicos," *Diplomatic History*, 2009, 33:405–426; and Pribilsky, "Developing Selves:

Yet an unintended legacy of the project is that it prompted anthropologists and demographers in the Americas to reckon with the devastating demographic impact of European conquest. For instance, through his involvement with the Vicos project, the anthropologist Henry F. Dobyns was galvanized into studying the epidemic history of the Andes during the colonial period. Through his Vicos work, he was also prompted to reassess existing methods for estimating the population of the Americas before the arrival of Europeans.[95] Unsatisfied with the existing methods and their lack of historical rigor, Dobyns generated his own ethnohistorical approach and concluded that the population of the Americas before conquest was significantly larger than previous estimates. Dobyns's estimate was widely cited in the 1970s and became foundational for research on the demographic collapse of indigenous groups after European conquest and for Alfred Crosby's work on "virgin soil epidemics." When Dobyns began this research in the context of the Vicos project, he could not have foreseen that it would play a pivotal role in the establishment and growth of environmental history and indigenous history.[96] Demographic surveys may not yield cultural change, but we should remain open to the novel configurations of knowledge they might create the conditions of possibility for.

MUIGAI

The contributions to this conversation highlight a range of challenges—from practical considerations of implementation to epistemological concerns—that are inherent in building and governing a system of data collection. Those in support of the *Isis* Editors collecting demographic data and, more broadly, attending to enduring practices of exclusion, marginalization, and erasure within the field of the history of science note that determining what kinds of information to extract from potential authors requires careful consideration. In addition, the format in which information is captured (predetermined categories to check off? open-ended surveys? questionnaires more akin to the "diversity statements" now included in scholarly and academic applications?) can easily slip from being inclusive to being intrusive and work to reify the centrality of the majority in relation to groups deemed "other." As Ahmed Ragab notes, while preformed categories may be easier for the journal's Editors to analyze, they also function to "limit and delineate the categories of 'diversity' by creating (or curating) lists of possibilities that one needs to fit into." Part of the challenge for the *Isis* Editors will be to "problematize" the very categories we have come to rely on for collecting diversity data. I agree with Ragab that embracing the messiness that comes with allowing individuals to choose what demographic information to share will make it "quasi-impossible to quantify the diversity of authors fully but will permit experiential identities to cohere at will."

What is at stake in the journal's decisions is further elaborated in Emily Merchant's discussion of the decennial U.S. Census. Whereas other scholars have focused on the politics that have driven the creation, inclusion, and removal of specific racial and ethnic categories in the census, Merchant works with a wider lens to argue that underlying these constant revisions has been a marked shift in the use of racial classifications to create "categories to be protected rather than categories to be systematically disadvantaged." Counting by race has always been political,

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Photography, Cold War Science, and 'Backwards' People in the Peruvian Andes, 1951–1966," *Visual Studies*, 2015, 30:131–150.

[95] Henry F. Dobyns, "An Outline of Andean Epidemic History to 1720," *Bull. Hist. Med.*, 1963, 37:493–515. Whereas previous researchers had produced estimates between 8,400,000 and 13,385,000, Dobyns estimated that the "New World" was inhabited by approximately 90,000,000 people before European conquest. See Dobyns, "An Appraisal of Techniques with a New Hemispheric Estimate," *Current Anthropology*, 1966, 7:395–416.

[96] Alfred W. Crosby, "Virgin Soil Epidemics as a Factor in the Aboriginal Depopulation in America," *William and Mary Quarterly*, 1976, 33:289–299; and James D. Rice, "Beyond 'The Ecological Indian' and 'Virgin Soil Epidemics': New Perspectives on Native Americans and the Environment," *History Compass*, 2014, 12:745–757.

but, as Merchant takes care to highlight, these political ends have moved along a spectrum of legally mandated exclusion to inclusion. As she notes, "data can be used for a multiplicity of purposes," and she goes on to argue that the data we choose to collect from individuals matters insofar as we pay attention to "what is done with the data."

A central question guiding the conversation on demography and discipline—Can we survey our way to cultural change?—recalls early twentieth-century attempts during the Progressive Era when social reformers and activist intellectuals in the United States and Europe placed great faith in statistics as the ideal instrument for analyzing social problems. Through extensive data-gathering practices, this scientific impulse of progressivism sought to transform everything from factory labor to motherhood.[97] Investigators at new government agencies like the U.S. Children's Bureau conducted surveys that they took pains to present as methodologically rigorous, reflecting a widespread belief that the social sciences could generate better understandings of and solutions to pressing social issues like infant mortality.

Whereas physicians and coroners tended to record specific diseases and health conditions as the cause of death on forms like death certificates, agents at the Children's Bureau argued that sickness was only a clue to the real, underlying causes of mortality, which are rooted in the social and economic conditions in which children were born.[98] As an arm of the Department of Labor, bureau agents were particularly interested in demonstrating the effect of a father's wages on the health and survival of his family. By foregrounding the role of social determinants of health, the bureau's groundbreaking studies of the 1910s and 1920s eschewed narrow, clinical explanations in favor of a broader, public health perspective for understanding and preventing infant mortality.

Yet the bureau's willingness to center class in its analysis of health only went so far. In the few surveys that included sizable black populations, the birth attendant rather than the family's economic circumstances became the primary lens through which bureau agents scrutinized black health outcomes. In focusing on individual actions—for example, whether midwives followed hygienic procedures—rather than on the conditions that made midwives the only affordable and accessible health practitioners in many areas, government officials reframed what initially was a study of the causes of infant mortality into a campaign to regulate midwives. This shift would have long-lasting implications for the way government officials scrutinized and investigated black childbirth outcomes.

More critically for the conversation at *Isis*, the ease with which race became the dominant factor for analyzing difference—in a way that diverted attention from other factors, including class and geography—reveals that even as we strive to increase diversity we run the risk of overemphasizing certain factors as markers of inclusivity and progress. As Progressive Era reformers knew all too well, the research they undertook—however meticulous it was—did not automatically translate into successful change. What was needed to save babies' lives weren't more local surveys and investigations but more federal funding for public health services. In a similar vein, the Editors of *Isis* would do well to link their commitment to surveying to a commitment to allocating more resources—time, money, and expertise—to increasing diversity and inclusion within the field.

CONCLUSION: MUKHARJI

Like any productive conversation, our conversation on demography and discipline has not yielded any easy, one-line solution. It has, however, raised a series of troubling questions, sensitized us to

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[97] Daniel T. Rodgers, *Atlantic Crossings: Social Politics in a Progressive Age* (Cambridge, Mass.: Harvard Univ. Press, Belknap, 1998).

[98] Jessamine Whitney, *Infant Mortality: Results of a Field Study in New Bedford, Massachusetts, Based on Births in One Year* (Washington, D.C.: U.S. Government Printing Office, 1920).

potential consequences, and articulated some concrete visions of how we might proceed in our objective of making *Isis* more open to difference. Sheldon cautions us that this openness to diversity and difference should not be authorized in the name of simply writing "better histories." Making history writing its own transcendent end, she rightly reminds us, might in turn lead us once more to feel that "we are justified in ignoring, silencing, and rejecting those whom we might instead seek community with in the present." As Keel points out, the openness to difference must be founded on the realization of the deeper intellectual productivity of such difference. Eschewing ahistorical ideas of objectivity, we must recognize the ways in which historically fashioned identities enable scholars to ask productive new questions and offer novel insights. Merchant echoes this. Drawing on Sandra Harding's notion of "strong objectivity," she argues that we must not simply include multiple perspectives but in fact privilege those perspectives that have hitherto lacked power. What Keel's and Merchant's comments remind us is that the need to diversify *Isis* in particular and history of science more generally is not just a matter of "inclusion"; it is also a matter of "transformation." A greater engagement with diversity will, potentially, transform the journal and the scholarly community to which we belong in ways that will lead directly to new intellectual insights.

To achieve this goal, however, we must confront what Gil-Riaño calls the "tactical mobility" of racism (and, one may add, sexism)—that is, its capacity continually to reinvent itself and manifest itself in new contexts. This is where this conversation has been most productive. Our colleagues have offered two broad sets of proposals to help us confront the racism and sexism that continue to haunt our field and stunt its intellectual horizons. The first set of proposals alerts us to the potential pitfalls of demographically oriented efforts to diversify. The second set makes a series of practical recommendations as to what we might do. Before concluding this discussion, therefore, it would be good to recap both these sets of proposals.

Quite a few of our colleagues have tempered the enthusiasm for statistically oriented demographic initiatives. Ragab has been the most blunt, questioning why we find such statistical proof necessary rather than relying on the experiential affirmation that HSS and *Isis* are clearly "too white." He has questioned whether the production of graphable, well-curated, and statistically organized diversity is not simply a way of disciplining difference and neutralizing its capacity for effecting radical change. Burton has echoed this anxiety by reminding us of the "reductive power" of statistics. Muigai's rich historical account of African-American midwives in the American South has further demonstrated how the categorical language of birth registration forms was used to discipline and control both the midwives and their knowledge. Her intervention forces us to consider the relative power differentials that undergird any attempt by *Isis* to collect demographic data.

Another set of concerns has revolved around the actual, operational lives of demographic numbers. Seth has pointed out how numbers, once collected, have historically been mobilized for very different ends—to produce raced bodies and identities. Gil-Riaño has likewise worried whether a statistically driven demographic effort to diversify might not descend in time into mere "box-ticking." His historical account of how "multiculturalism" and "diversity management" promoted depoliticized, status-quoist forms of "inclusion" is a reminder of the ways in which population counting can often produce the very obverse of the empowerment and diversification it rhetorically claims to further. Merchant pithily sums this up for us by writing that "the point is simply that the same data can be used for a multiplicity of purposes, and beneficence in the intent behind data collection does not necessarily ensure beneficence in data analysis or in the uses to which analysis is put."

One of the more rarely reflected on but potent functions of demographic profiles has been to construct an implicit definition of what constitutes history of science. Again, as Merchant puts it, journals "not only build epistemic communities but have also come to *represent* them." Ragab refers to this as the "indexical function" of demographic codes, which filters which histories,

epistemologies, and rationalities belong to our field and which do not. At a time when many historians of science are beginning to question the extent to which the term "science" itself is a prejudicial category that excludes many historically valid forms of knowing and are calling for other rubrics, such as the "history of knowledge," it is crucial to recognize this indexical function of demography in representing a map of the objects of study.[99] These debates over what constitutes "science" and what historians of science should study have often led to the argument that by holding a restrictive notion of what forms of knowing are included in our historical narratives we perpetuate the historical legacies of colonialism. Shiv Visvanathan, for instance, has called for "cognitive justice," while Boaventura de Sousa Santos has written about the "epistemicide" of Southern knowledges.[100] It is these debates that are alluded to in Keel's example of critical race theorists and indigenous scholars remaining skeptical of even seemingly politically progressive scientific theories, such as the "African Eve" hypothesis.

Another issue closely related to this indexical function of demographics is raised by Burton: she points to the editorial gatekeeping that asks certain scholars but not others to demonstrate "relevance to the field." Why, for instance, does even an arcane and technical account of, say, Galileo or Einstein *ipso facto* appear more "relevant" to our field than, say, an account of eleventh-century Sanskrit gemology, Russian Cosmism, or Turkish genetics? Clearly, this question of "relevance" turns on who we think constitutes our community and what pasts matter for that community. This is where, as Burton points out, diversity is really curtailed; but it is not done with any explicit intention of keeping people out. Rather, it operates by embedding patterns of exclusion into the often-mundane editorial prerogatives.

Interestingly, Burton feels that some of this could be changed were the Editors to pay conscious attention to the "chilling language" in which editorial decisions are couched. Several other interlocutors also raise the issue of language. Muigai felt that any survey *Isis* might undertake should pay careful attention to the language that is used. Gil-Riaño was worried by the historical baggage that our own language continues to carry. He pointed out that even the seemingly benign intention to produce "cultural change" in *Isis* through the collection of demographic statistics was tinged with a history of U.S. imperialism during the Cold War. He asked, Why should we not invoke a language of "revolutions" instead, since that language was historically connected to more hopeful, empowering, and liberationist genealogies?

Notwithstanding these many and serious caveats, most of our interlocutors also offered a range of pragmatic suggestions. The most insistent among these suggestions was that any data-collection project that *Isis* undertakes be directly connected to explicit initiatives that go beyond that data collection. Ragab called this the "teleology" of the demographic project. What our peers were most wary of was an initiative where data collection was imagined as an independent diagnostic tool that could produce undetermined future interventions to promote diversity.

Muigai urged the Editors to "link their commitment to surveying to a commitment to allocating more resources—time, money, and expertise—to increasing diversity and inclusion within the field." Merchant supported this idea but also thought that the Editors ought to make their goals for any data collection public through an announcement in the pages of the journal of the aims for which the data was to be gathered. Burton had even more concrete suggestions about the kind of initiatives for diversification that might be linked to the data collection. Two that she highlights are a "Sponsor-a-Scholar" program and a "First Research Article" program that

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[99] See, e.g., the new journal called *Journal for the History of Knowledge*.

[100] Shiv Visvanathan, *Carnival of Science: Essays on Science, Technology, and Development* (Delhi: Oxford Univ. Press, 1997); and De Sousa Santos, *End of the Cognitive Empire* (cit. n. 39).

are directly targeted at providing mentorship and resources to help scholars from traditionally excluded backgrounds publish in *Isis*.

Above all, our conversation highlighted the need to be clear about why diversity is desirable in the first place. Most of us pointed out that without such clarity diversity initiatives tend frequently to degenerate into corporatized means of co-option and further marginalization. As Sheldon forcefully argues, diversity cannot be a mere "aesthetic"; nor indeed can it be justified in the name of writing "better histories." Keel, most explicitly, urges us to be candid in linking the diversity agenda to political struggles. But Sheldon goes further and points out that critical epistemologies are a "gift" that helps "train" the scholarly imagination.

More hopefully, Keel points out that the very conversation we are having, and those of us who are part of it, bear testimony to the fact that "nonwhites and nonmales" have "ascended into the profession of historical scholarship." But he hastens to add that this in itself is a paradox, for it also reveals that those of us who have thus gained entry into platforms from which we had previously been excluded have also, in consequence, "become the stewards, beneficiaries, and targets of the most dangerous aspects of this tradition." Demographic surveys, Keel feels, are therefore necessary—not as a perfect tool but, rather, as a blunt instrument that might still help us map the extent to which earlier struggles from the 1960s have succeeded and where they have fallen short. I would add that the history of the present initiative itself underscores Keel's point. Having been initiated by the Women's Caucus, as part of their efforts to augment the participation of women in our field, it has now grown in new directions, engaging multiple other groups of scholars who feel excluded by their racial, gendered, or geographic and social locations. This conversation reflects the diversity of those voices, but it must also acknowledge that the conditions of their own possibility emerged out of an earlier set of efforts to mobilize demographic data in the interests of women's scholarly participation.

Ragab also sees a more ironic value in the demographic surveys. Irrespective of what they achieve by being teleologically linked to other initiatives for diversification, he feels that surveys might serve a function precisely through their failures. By their very performative unworkability, they might serve to confound the carefully curated diversity within which surveys have traditionally disciplined more radical possibilities. Muigai's suggestion that we include blank spaces where respondents are encouraged to enter their own notions of self-identity might help further this ironic use of surveys.

David Arnold once pointed out that "race" was never a "relatively homogeneous set of ideas and practices, driven by material greed and social anxieties in the West, and capable of delivering social power and political authority to whites across the globe." It was always a far more "nebulous and self-contradictory concept" that was frequently "internalized and reworked" by the very people who were the subjects of European racial discourse.[101] We might make comparable statements about both "gender" and the very act of "population counting." None of these were or are homogenous, transparent terms. They are each secreted within their own specific histories and refracted by the other historical trajectories with which they intersect. The relationships between these terms therefore are neither one-sided nor entirely predictable. If *Isis* does go ahead with its demographic project, it will have both intended and unintended consequences. As historians, we can learn from the past and try to avoid the pitfalls we know to exist, but we also have to be open to the inevitable serendipity of history.

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[101] David Arnold, "'An Ancient Race Outworn': Malaria and Race in Colonial India, 1860–1930," in *Race, Science, and Medicine*, ed. Waltraud Ernst and Bernard Harris (London: Routledge, 1999), pp. 123–143, on p. 123.

Our conversations have not produced any simple punch line. There is no simple answer to the question of whether demographic data helps to diversify the discipline or discipline diversity. Rather, what our conversations may prompt us to do is try to be clear in our ethical commitments, perspicacious about the unfolding of contingent possibilities, and convinced that diversity is not just about admitting the Other, but about transforming the Self.