



Historicizing Knowledge about Human Biodiversity

An Independent Research Group Is Investigating the History of the Biosciences during the Twentieth Century

By Veronika Lipphardt

As geneticist Leslie C. Dunn stated in 1956, “In the field of human variation we tread warily. We confine ourselves to such questions as can be studied objectively, quantitatively and thoroughly.” Shortly before, Dunn had founded the Institute for the Study of Human Variation, a research facility committed to exploring with the aid of the most modern bioscientific methods a range of questions surrounding human diversity.

Participating researchers examined such cases as the caste system in India as the “greatest genetic experiment in history” and ethnic differences in the biochemical composition of body fluids. Dunn, for his part, set up a case study to investigate the bioevolutionary consequences of voluntary isolation. Belonging to a “race,” according to Dunn, was not the *cause* of social difference, but rather its *consequence*. After 1945, research involving the category of “race” was generally regarded as discredited. The question that again presented itself was: How

can human diversity, or “human variation,” be adequately described and researched? In the years after the Second World War, however, the biosciences managed to open a new perspective on this particularly thorny epistemic problem by using the term “population” in its place instead of “race.” A MPIWG research group is tracing the history of this paradigm shift during the twentieth century.

Human diversity has been a subject of scientific interest since the early modern era. As explorers and scientists, Europeans from a variety of



Fig. 1: This textbook drawing seeks to portray biological differences between “Asians” and “Europeans.” Source: Walter Hollitscher, *Lebewesen Mensch. Natur und Mensch im Weltbild der Wissenschaft*, vol. 4 (Cologne: Pahl-Rugenstein, 1985), 153. Reproduced with the permission of the Pahl-Rugenstein Verlag Nf. GmbH, Bonn, Germany.

disciplinary approaches reported on the inhabitants of other continents. Among the subjects that captured their interest were the global diversity of cultural products, languages, patterns of behavior, and biological characteristics. Natural scientists seeking to grasp the nature of human diversity collected and placed in comparison to one another skulls and other parts of the human body, as well as eye, skin, and hair color samples. With the publication of Charles Darwin’s works, the bioscientific perspective on “human variation” fundamentally changed. Darwin’s theories presented human diversity as an historic consequence of biological evolution. In humans and animals alike, intraspecific diversity, i.e., variation within a species, was thereafter regarded as an evolutionary stage in the formation of new species. Subsequently, variation, migration, isolation, and selection were treated as concepts that could be applied to human history as well. After the rediscovery of the Mendelian inheritance at the beginning

of the twentieth century, the biological understanding of diversity among scientists underwent yet another profound transformation: now regarded from a genetic standpoint, scientists began to investigate diversity via the latest bioscientific methods. Researchers adopted a variety of new empirical approaches, turning their attention to the composition of body fluids, blood groups, brain structure, physiological energy spectra, as well as such subtle anatomical traits as the form of the eyelid (see Fig. 1).

Until the mid-twentieth century, bioscientists seeking to understand the phenomenon of human diversity generally used the term “race.” After the end of the Second World War, however, racial science faced fierce criticism not only from scientists, but politicians and other social actors as well. Without a doubt, contemporary racism and the highly influential racial theories of the era played an unmistakably large role in the sciences. That said, considered from today’s perspective historical research on biodiversity cannot be reduced to this political dimension alone. The field’s motivations, agendas, and areas of influence were complex, diverse, and operated according to their own scientific logics.

Some well-known life science researchers responded to the dilemma posed by the threat of the allegation of racism with anti-racist engagement. Seeking to confine the use of the concept of race, they focused their scholarly energies, like Dunn, on supposedly modest, well-defined projects. In early 1954, Dunn and his team of researchers began a study of Rome’s Jewish community. Dunn proceeded from the assumption that this community had from antiquity onward lived – for religious reasons – in isolation from the larger Christian society, e.g.,

that virtually no interfaith marriages had taken place and the community had remained on evolutionary “isolate.” To verify this hypothesis he cooperated with a cultural anthropologist. This scholar then set out to corroborate what he viewed as the current social and reproductive isolation of Rome’s Jews in social and cultural terms. Dunn, for his part, turned his attention to the historical literature in his effort to document what he regarded as the reproductive isolation of Rome’s Jews across the centuries.

Dunn’s study came to the conclusion that Jewish families living in the area of Rome’s former Ghetto had not intermarried with Christians. Because Jews who married Christians had moved to other parts of town, they could no longer be regarded as part of what Dunn described as the “nuclear community.” The next step for Dunn was to win over those Jewish families living in the area of the former Ghetto for his study. To this end, Dunn turned to the local medical institutions of the Jewish community (see Figure 2). These in turn granted him and his team of researchers access to patient records, providing research facilities while at the same time distributing food parcels and medications to the individuals and families examined by Dunn’s team. The test subjects also reported that their families had always lived in the area of the former Ghetto and had only married among themselves, offering Dunn’s researchers further confirmation of their “isolation conjecture.” Dunn then proceeded to carry out genetic blood tests on hundreds of members of the city’s Jewish community. These tests confirmed a higher percentage of blood group B among members of the “nuclear community” vis-à-vis the majority Christian population. Af-

ter comparison with historical information from other European countries and more recent data from Israel, Dunn concluded – as one can show, unjustifiable – that Rome’s Jews had brought this genetic trait with them to Europe in ancient times, preserving it through reproductive isolation.

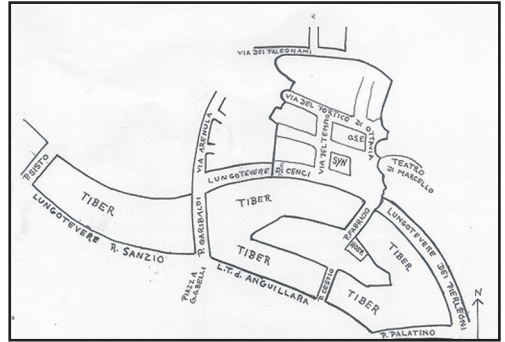


Fig. 2: Dunn’s research team completed this hand-written sketch in their efforts to document the former whereabouts of the medical and religious institutions of Rome’s Jews. Source: American Philosophical Society, manuscript collection, Dunn, Leslie Clarence (1893-1974), B D917.

Dunn’s study illustrates not only the complexity, but also the dilemmas surrounding bioscientific research on diversity during the twentieth century. There was, on the one hand, the attempt to describe diversity as a global phenomenon, to establish a coherent classificatory system for all humanity that at the same time allowed one to offer an equally coherent description of human evolution. On the other hand, empirical research on human diversity also compelled scientists to carry out investigations at the micro level. The borders between these levels of analysis presented tensions scholars were time and again forced to manage.

Diversity research almost never took place in the laboratory, but rather in the middle of society. And at least in non-totalitarian societies, without the consent of subjects the collection of data was virtually impossible. Rather, information was gathered through material transfers, such as medical services or opportunities to identify with the scholarly endeavor, thereby offering test subjects and scientists alike the opportunity to insert their own “pre-ideas” (Ludwik Fleck) about human diversity into the investigation. It proved almost impossible to separate clearly the older “racial research” from the new evolutionary-biological/human-genetic approach. Although Dunn sought to avoid essentialist attributions in the style of the earlier race science, older bodies of biological knowledge – as well as a broadly disseminated biohistorical narrative about the so-called “Jewish race” – nonetheless found their way into his research.

Our project questions the way many historians have ended their analyses of racial science in 1945. While racial research in a formal sense ended with the Second World War, research on biodiversity continued apace. A series of molecular genetic, pharmacogenetic, and genealogical projects have in recent years once again inflamed public discussion of human genetic diversity. Similarly, albeit for very good reasons, racial science in specific national contexts initially stood at the center of historical research. This was true of both scholarship on the

Nazi period in Germany, as well as discrimination against African-Americans in the United States. Our new research group focuses on the transnational dimensions of exploring human biodiversity, especially in colonial and postcolonial contexts. Our aim is to investigate not merely the history of knowledge production about “races.” As we are discovering, throughout the twentieth century a number of life scientists observed a plethora of forms of biological diversity, describing them as smaller or larger “populations,” “communities,” “population groups,” or tiny “isolates.” Our projects pinpoint knowledge about human diversity in colonial discourses set in Pacific islands during the 1920s and 1930s, in human genetic research projects carried out by Western scientists in non-Western societies during the 1950s and 1960s, as well as biomedical research and population studies carried out in the Soviet Union and the Russian Federation since the 1970s. The myriad interests and contexts in which knowledge about diversity finds application are at the center of our new research group’s inquiries. The group is part of a new cooperative effort involving the MPIWG and the three main universities in Berlin.

Veronika Lipphardt has been Director of the Research Group *Historicizing Knowledge about Human Biological Diversity in the 20th Century* at the MPIWG since 2009 (vlipphardt@mpiwg-berlin.mpg.de).

The full version of this feature and more research topics are accessible at the Institute’s website („News/Feature Stories”).