

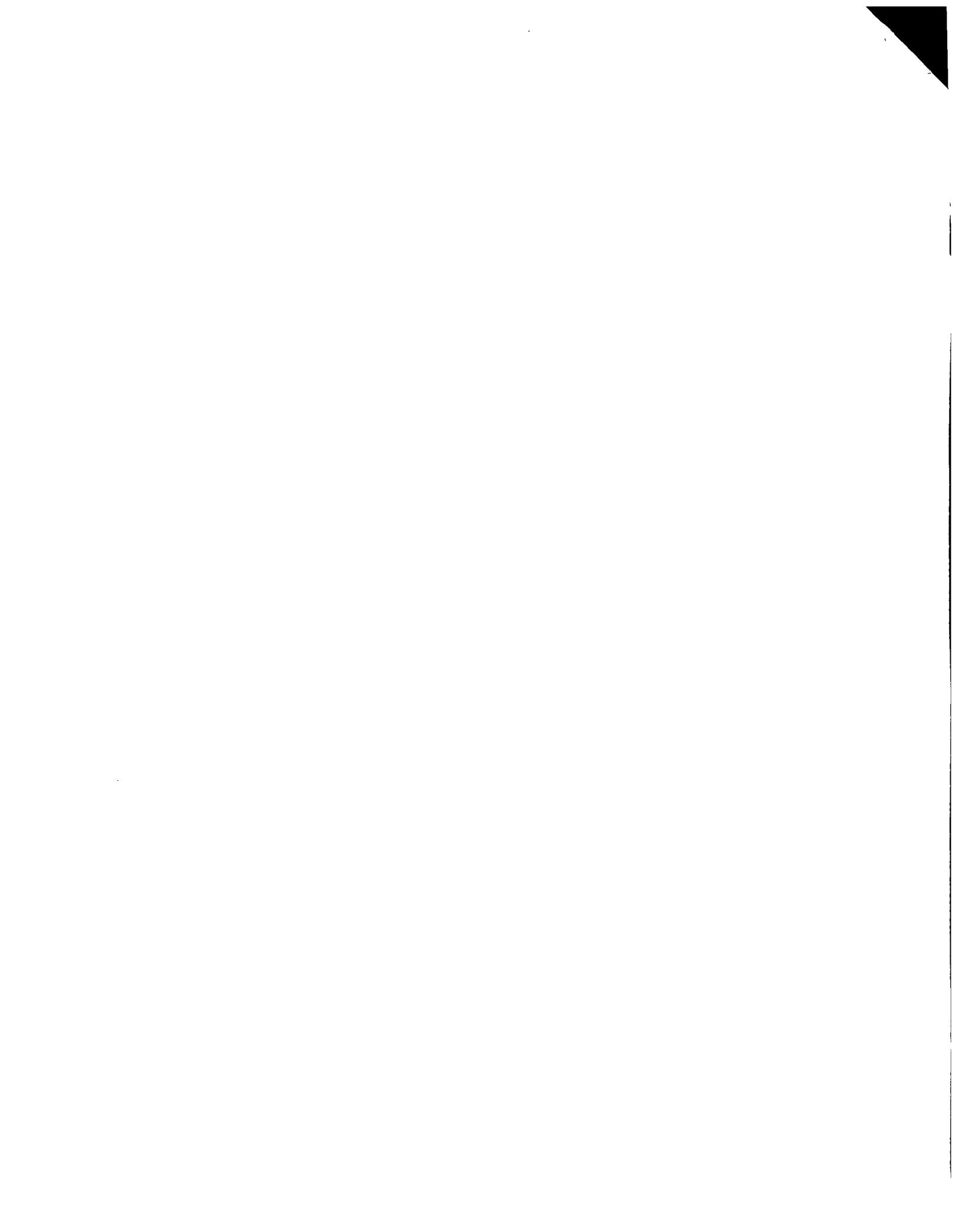
## Nation and Difference in the Genetic Imagination of Colombia

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The project known as *Expedición Humana*, or Human Expedition, was a milestone in genetic research in Colombia. This project, which ran from the end of the 1980s through the first half of the 1990s, sought to explore the diversity of the Colombian population in terms of molecular genetics and aspects considered cultural. For this purpose, the researchers carried out multiple expeditions to (mainly indigenous and black) isolated communities in the peripheral areas of the country.

The Human Expedition reveals the way in which a significant number of genetic researchers imagined the relationship between difference and nation in Colombia at a particular moment. Although their ideas reproduced historically sedimented representations of difference, they also ushered in a new set of arguments and technologies that purportedly revealed a reality which had remained hidden until then. For these researchers, difference had become visible at the molecular level for the first time in Colombian history.

The Human Expedition was not the only noteworthy genetic research project in Colombia during the 1980s and 1990s. Other research projects in population genetics, which were mainly associated with Emilio Yunis Turbay—one of Colombia's pioneers in genetics—focused on the analysis of mestizo populations. Contrary to the Human Expedition's interest in isolated communities, they were primarily concerned with analyzing Colombians' genetic intermixture. This was in line with dominant notions of *mestizaje*, which conceived of national diversity in terms of spatialized variations of the mestizo's "triethnic composition" (black, indigenous, and European). In the 1980s, the ideology of *mestizaje*, which maintained that all Colombians are racially mixed—albeit in different proportions of the constituent racial groups—was dominant. Thus, much of the population genetics research that was carried out during this period took *mestizaje* as a given. This was the case even though Colombian national identity has not been as strongly associated with the notion of the mestizo as that of some other Latin American countries, such as Mexico. Even though few Colombians would readily use the term "mestizo" as the most



immediate identifier to refer to themselves or the Colombian population at large, the idea that most Colombians are mixed circulated as common sense. This triethnic idea of diversity is in some, but not complete, contrast with post-1990 ideas of multicultural diversity, which envision the Colombian nation as a mosaic of more discrete population groups. Despite multicultural reforms, this commonsense understanding of Colombia as mixed remains strong today. Now, as then, when asked about the ethnic character of the nation, it is quite common to hear people make statements such as “Aquí en Colombia somos muy mezclados” (Here in Colombia we are very mixed).

We begin with a brief overview of the trajectories of genetic research on human populations in Colombia, and then provide an in-depth description of the Human Expedition program, examining its impact on the way in which the relationship between nation and difference is imagined in Colombia. We then contrast the Human Expedition to the other population genetics research projects undertaken by Yunis and his collaborators. Finally, we point to some substantive changes that are taking place in genetic research in Colombia as a result of a recent emphasis on forensics. In recent years, national genetic imaginaries have emerged from the pragmatic search for ways of identifying bodies in the context of an escalated armed conflict. Although the priorities of population genetics have shifted, forensic genetics also draws from and reconfigures past notions of molecular difference among the nation’s populations.

### Beginnings of Human Genetics in Colombia

According to its own protagonists, the history of genetics in Colombia emerged thanks to founding figures who organized the field around particular research lines and institutions.<sup>1</sup> The first of these founders is the medical doctor Emilio Yunis Turbay.<sup>2</sup> He describes his first years as a “self-taught” geneticist as an experience of running back and forth between labs in order to use the centrifuge and microscope, which were located on different floors (cf. Fog 2006). His foundational history is tied to the Universidad Nacional and to the first lab that did paternity tests in Colombia, the Instituto Colombiano de Bienestar Familiar (ICBF), at the end of the 1960s. Yunis was a pioneer in the field of clinical genetics in Colombia when the main goal of this burgeoning discipline was to investigate the possible genetic baggage of unknown or understudied diseases. Also, given his role in the institutionalization of DNA paternity tests within the ICBF, Yunis was critical to the beginnings of forensic genetics in Colombia.

At the same time, another foundational figure of Colombian genetics ap-



peared on stage: Dr. Jaime Bernal Villegas. Bernal was the first Colombian to obtain a PhD in human genetics, and upon completing his doctoral studies at Newcastle University in the United Kingdom he returned to Colombia and became the driving force behind the Genetics Unit of the Pontificia Universidad Javeriana's (PUJ) Medical School in the early 1980s. Over the next decade, this unit became the Institute of Human Genetics (IGH-PUJ).

In 1979, Dr. Hugo Hoenigsberg and Dr. Helena Groot, who were part of this first generation of Colombian geneticists, founded the Human Genetics Lab at the Universidad de los Andes (LGH-Uniandes) with Maria Victoria Monsalve. This lab spent its first years doing population genetics research that utilized blood groups and enzymes "to establish genetic divergences between different ethnic groups in the country."<sup>3</sup>

Once institutionalized as a disciplinary field, human genetics labs produced a second generation of geneticists who began using new biological markers such as blood groups, antigens, and different protein types, in addition to mitochondrial and Y-chromosome DNA. This second generation, much larger than the first, has shown a strong interest in understanding the population dynamics of the Colombian nation, both for clinical diagnoses and for anthropological purposes. The interests of the second generation extend to new research fields such as the analysis of complex diseases (e.g., depression and diabetes), and forensics and criminalistics (although as noted above paternity tests had been done since the late 1960s). This second generation of geneticists transformed university spaces in significant ways. They created a discipline with a primarily clinical and academic profile and established human genetics as the legitimate expert field concerned with explaining the relationship between difference and nation in Colombia.

Although the institutionalization of human genetics was driven by researchers housed in various labs across the country, the Human Expedition program, which was spurred by the IGH-PUJ, left a deep imprint on the second generation of Colombian geneticists and the practice of genetics in Colombia more broadly. What began as a population genetics project carried out by a small group of experts turned into a large interdisciplinary research and service program, which was first known as the Human Expedition 1992 (1988–1992) and then as the Great Human Expedition (GHE; 1993–1994).

### **In Search of the Hidden Americas: The Human Expedition Program**

The Human Expedition 1992: In Search of the Hidden Americas was an ambitious program that involved students and professionals from various fields,



mainly based at the Universidad Javeriana. The main objective, as its subtitle suggests, was the revelation of a deep truth that had long remained concealed. In its own language, the program consisted of “expeditions” to marginal areas to “visit isolated communities” (many of which were indigenous) to undertake studies, accompanied by a medical and dental team that provided free care. Dozens of *expedicionarios* or expedition members arrived in these “remote” places in order to do research or participate as members of the “medical mission.” The program aimed to learn more about and value the “diversity of the Colombian population.” Although genetics was at the center of the program’s objectives, this was not the only aspect considered.

According to its main promoter, Dr. Jaime Bernal, the idea for the Human Expedition emerged in 1987. In an article published in the national newspaper *El Tiempo* (5 May 1991) and in the internal project newsletter, *Boletín Expedición Humana 1992*, Bernal writes: “Four years ago [i.e., in 1987], sitting at a traffic light on my way to the hospital I wrote in my notebook: ‘In search of the hidden Americas, Human Expedition 1992’ and I knew then that I had found the way to expand the impact of genetics, the field in which I had been doing research and clinical work since I was a med student” (Bernal 1991b: 2).

The Human Expedition 1992 also emerged from the convergence of multiple factors and from the accumulation of several years of clinical and population genetics research undertaken at the Clinical Genetics Unit of the Universidad Javeriana. In a certain sense, the program was a natural outgrowth of an interdisciplinary research practice that had become common in the field of genetics in Colombia. As one of the geneticists at the IGH put it, “Beginning in the seventh year of fieldwork . . . we started to speak about the Human Expedition in order to provide ongoing research projects with a [common] conceptual framework. Already at this time, these projects went beyond the genetic realm and engaged with cultural aspects such as music, architecture, art, and sociology” (Gómez Gutiérrez 1998: 132).

Various external factors also help us understand why the program emerged and why it took the form that it did, including the growing visibility of molecular research on human populations. The Human Genome Project, which began in 1990, gave international genomic research an unprecedented push and fed the social and political imaginaries of genetics that circulated among nonexperts. After this, other large-scale projects such as the Human Genome Diversity Project and HapMap emerged.<sup>4</sup>

Given this international effervescence in human genetics research, it is not surprising that the Human Expedition 1992 program established relationships with parallel institutions in other parts of the world, creating a network





of exchange and collaboration. One contemporary article stated: “The project [has] awakened an unprecedented level of interest from other research groups across the world, and we have signed academic collaboration agreements with these research centers” (PUJ 1992: 14). Amid the numerous relationships with international institutions, the relationship with the Academia Real de las Ciencias Exactas Físicas y Naturales de España is noteworthy. This collaboration is described as the Human Expedition’s involvement in a project on the “biological genesis” of “our populations,” meaning the populations of Mexico, Venezuela, Chile, Argentina, and Colombia.<sup>5</sup> This project, in which colleagues from these countries participated, sought to identify and examine “some biological markers and to involve isolated populations” (*Boletín Expedición Humana* 1992, July 1989, 4).

In Colombia, the growing worldwide interest in population genetics did not go unheeded. As human genomics became a cutting-edge field, research centers raced to position themselves at the top of Colombia’s list of genetic institutions. Thus, by the early 1990s, the Universidad Javeriana’s Human Expedition program was one amid a number of research projects on population genetics in the country. According to Catherine Ramos:

In Colombia, there existed similar projects in other universities such as the Universidad de Antioquia, the Universidad del Valle and the Universidad Nacional, but their magnitude was similar to the first project Human Expedition 1992, and their dissemination reached scientific publications but did not go much farther. At the Universidad de Antioquia, Andrés Ruiz Linares, in the Medical School, was responsible for a project titled “Study of the genetic structure of the Colombian Amerindian population using classical and DNA markers.” Ruiz Linares had worked with professor Cavalli-Sforza, who was the principal investigator of the Human Genome Diversity Project (HGDP), and together with Sergio Pena, a Brazilian scientist, he created a Latin American committee to promote the advance of the HGDP regionally. At the Genetics Institute of UNal, a number of projects related to the genetic structure of indigenous communities were carried out, but it appears that they did not have any relationship or dialogue with their equivalents at the Universidad Javeriana. (2004: 14)

Therefore, the main differences between the Human Expedition and similar investigations elsewhere appear to be its scale and the fact that its home institution got involved at a university-wide level. Although there did not seem to be much dialogue and exchange with other groups dedicated to population genetics research, the Human Expedition program established links with other



entities such as the Instituto Colombiano de Cultura Hispana (Colombian Institute of Hispanic Culture): “We have signed an agreement between the Universidad Javeriana and the Colombian Institute of Hispanic Culture for the development of Human Geography in Colombia. This work intends to survey all of the available information regarding the diverse Colombian ethnic groups, their history, their culture, and their biological structure. We have initially designed six volumes of 500–600 pages each, following a single format that will collect the most important aspects of each human group” (*Boletín Expedición Humana* 1992, April 1990, 8). The interesting thing about this agreement is that it signals the central role that the Human Expedition program played in defining, at both the conceptual and editorial levels, a collection of texts whose primary objective was to describe Colombia’s diverse “human groups.”<sup>6</sup>

Another important factor that helps explain the emergence of the Human Expedition 1992 is the historical conjuncture of the Quincentenary: “The Universidad Javeriana announced the Human Expedition 1992, beginning on October 12 [1988]. With it we expect to carry out an interdisciplinary research process that will lead to true knowledge of what the Colombian population really is 500 years after the arrival of the Spaniards to the Americas. The Human Expedition is therefore one of the activities with which the Universidad Javeriana will commemorate the Fifth Centenary of the Encounter between Two Worlds” (Bernal 1989: 1). The explicit association between the Human Expedition and the commemoration of the Fifth Centenary is symbolized by the choice of 12 October as the official opening date for the program.

Many of the program’s internal documents refer to the project’s contribution to the construction of a genetic map of the Colombian population. By 1994 this objective was being presented in the following way: “The Human Expedition is an interdisciplinary research and service process that is centered on the Colombian population’s genetic map, which strives to give a biological explanation of the current structure of our populations, understood not only as human settlements but as dynamic processes of interaction between man and his environment” (Bernal and Tamayo 1994: 33). This aim is then disaggregated into a detailed set of objectives:

- To provide scientific evidence that highlights the human and cultural diversity of our country.
- To search within our human groups for problems whose investigation can contribute to the production of universal knowledge.
- To examine the human history of our country with modern technologies that can generate or confirm historical hypotheses.



- To strive to generate awareness about our biological and cultural identity within the universal context. (Bernal and Tamayo 1994: 37)

Several aspects of the project's objectives are noteworthy. First, scientific intervention is seen as capable of highlighting the biological and cultural diversity of the nation. Scientists appear as key mediators who facilitate the "discovery" and valorization of diversity. Second, there is a taken-for-granted relationship between the particular "problems of our human groups" and the possibility of contributing to the production of "universal knowledge." This suggests that Human Expedition researchers believed in the existence of universal knowledge (which is common in certain epistemological frameworks and in science more broadly) and were convinced that certain problems of "our human groups" (the "our" in this sentence is clearly a nationalist figure) could be translated by the expert's labor into the language of the universal. A third idea is that modern technologies can be employed to answer historical questions and that they are a decisive source of truth capable of confirming or debunking hypotheses regarding the origins, kinship, migration routes, and characteristics of different populations. Genetic decoding appears as an unprecedented and indisputable archive of "our country's human history." Finally, using arguments that are founded in human genetics and purport to penetrate to the deepest plane of the individual and his or her molecular composition, Human Expedition researchers shored up claims for the singularity of Colombian cultural and biological identity. As we will see later on, these objectives repeatedly appealed to the idea of an "us," and contributed to changing notions of Colombianness by fostering an awareness of "the country's diversity." This emphasis on diversity was in line with an overall shift in ideas of the Colombian nation, which followed the 1991 Constitution and the concomitant multicultural turn that shaped the political and theoretical imaginary in the early nineties.

A few years prior to this, the IGH's research objectives had not been presented in these same terms. Some of the program's projects, such as the one titled Anthropo-genetic Studies of Isolated Colombian Populations, described its objectives as follows: "To undertake a joint anthropogenetic investigation in order to continue outlining the genetic structure of Colombian populations, which we have begun to sketch in our previous research projects" (Bernal 1991a: 1). Another example of this shift toward biological and cultural diversity is evident in the way in which Alberto Gómez, then director of the Clinical Genetics Unit lab, described the Human Expedition program: "The Human Expedition 1992 . . . seeks to identify the genetic foundation that defines the



Amerindian, black, and mestizo races that inhabit our territory, as well as the ethnography of the Colombian man” (Gómez 1992: 10).<sup>7</sup>

Three years after it began, the members of the Human Expedition 1992 program had taken approximately thirty fieldwork trips and visited thirty-four “indigenous and isolated communities” (PUJ 1992: 14), located in peripheral areas such as the Orinoco and Amazon river basins and the southwestern, Pacific, and Caribbean regions, largely in areas far from capital cities. Except for a few “black populations” in Chocó, San Andres, and Providence Islands, and a “campesino [peasant] community” in Saboya (Boyacá), all of the places visited were indigenous communities. In both qualitative and quantitative terms, the biological data collection, fieldwork, and associated analysis of the program were centered on indigenous groups.

### The Great Human Expedition: The Genetics of Salvage and Visibility

In 1992, the Human Expedition program was expanded into the GHE. This project ran from 12 October 1992 to 13 July 1993, during which time nearly four hundred students and professors carried out sixty interrelated research projects. The first of the expedition’s five phases began in Bogotá and headed southwest toward Tumaco, continuing through many of the most peripheral areas of the country. The GHE’s expeditions visited “more than 50 indigenous, black, and isolated communities across the country. Data from 8,815 individuals belonging to the diverse ethnic groups that make up the Colombian population were collected. These were distributed as follows: 5,989 *indígenas*, 558 *mestizos*, 1675 *negros* and 593 *colonos* [settlers, colonists]. Among indigenous groups, 34 different ethnic groups were covered” (Mendoza, Zarante, and Valbuena 1997: 5).

The GHE included a medical and dental mission, as part of the interdisciplinary research program. The archives include a description of the medical supplies used while treating thousands of patients: “Given that providing communities with medical and dental care was another one of the Expedition’s objectives, during the Expedition’s 17 trips the following were distributed to patients: 150,400 antiamebic capsules, 5,525 boxes of antibiotics, 28,000 analgesic tablets, 2100 antiparasitic treatments, and 25,500 vitamin tablets. And all this infrastructure enabled us to treat approximately 8000 patients in the most remote places of our country” (Zarante 2013).

As was the case with the Human Expedition 1992, the GHE also emerged in the conjuncture of the Fifth Centenary. This time, however, the breadth and reach of the GHE were presented as a herculean effort made by an interdisci-





plinary academic community in order to make visible the country's isolated communities, thereby making Colombians aware of their country's "multi-ethnic wealth." It was also envisioned as a means to build bridges between these isolated communities and other Colombians in an effort to find solutions for the former's urgent needs:

The Fifth Centenary of the Encounter of Two Worlds was key in taking an important step forward in the Human Expedition in order to better make sense of all the knowledge that has been acquired over these years, turning Colombia's attention to the situation that our isolated communities live in, and looking for sources of solutions to some of their most important needs. For this, we have planned a Great Human Expedition that will cover all the previously visited territories in order to continue our research process, to enable our isolated communities to find interlocutors that can aid them in their self-empowerment process, and to produce a graphic archive that will give other Colombians a clear idea about their multi-ethnicity. (*Boletín Expedición Humana* 1992, 1991, no. 13, 7)

Following a style reminiscent of the two paradigmatic scientific projects of what is now Colombia, the Botanical Expedition of the eighteenth century and the Chorographic Commission of the nineteenth century, the GHE hired an artist who was charged with producing a register of the faces, places, objects, and situations witnessed in the various expeditions. Photography and audiovisual media were thought not to possess the artistic and aesthetic qualities necessary to adequately portray the achievements of a scientific expedition with historic pretensions.

The interdisciplinary nature, the commitment to service, and the significant participation of students as expedicionarios are examples of the university's commitment to the program, which is in part explained by the successful fund-raising efforts of the director, Jaime Bernal. Another characteristic of the program is the fact that its participants produced numerous representations of it (such as the repeated statement that the GHE was heir to and on the same plane as the Botanical Expedition and Chorographic Commission; see Gómez Gutiérrez 1998). This suggests a desire to be hypervisible, made manifest through numerous articles published in national print media, countless publications written for a wide array of publics (that range from an article in the most reputable international academic journal to books written in a language easily accessible to nonexperts), and the production of many other materials that were not necessarily linked to genetic research.

The notion of an expedition and the use of the term "expedicionarios" reveal



the particular positionality of the program's designers as urban, middle-class, and highly educated people; a position from which the program's destinations are imagined as remote geographies and habitats of forgotten peoples ("isolated communities").<sup>8</sup> Many of the published reports are written in an adventurous tone that reveals the expedicionarios' sense of adventure when confronting the unknown: "We have made many trips since then; we have walked for days on end in Nariño, traveled to the most remote places of La Guajira in a four by four [vehicle], spent hours on a boat on the Atrato, Vaupés, and Caquetá Rivers; we have made long journeys on horseback and airports have become part of our daily routine" (Bernal 1991b: 2).

In numerous publications, this sense of adventure is evident in first-person accounts that portray a group of city people, the expedicionarios, penetrating some remote area in order to discover both with their own eyes and those of "all Colombians" geographies, natures, and "isolated communities" associated with the "Other Colombia," the one inhabited by the still "undiscovered Colombian."<sup>9</sup> These accounts narrate "anecdotes that contrast with the expedicionarios' urban perspective" and reveal how the expedicionarios discovered "places and people that inhabit a world that is entirely distant from the one in which they have routinely lived" (Ramos 2004: 8).

The results of the Human Expedition program are numerous. One of the most salient outcomes was the creation of a biological bank of human tissue (which in some articles is called an Amerindian biological bank, or American biological bank). This bank was created in the early 1990s in order to conserve the biological material that had been collected over the years from the work performed in the Clinical Genetics Unit and the Human Expedition, but it also provided a storage service to clinicians and researchers who wanted to deposit samples there (Gómez 1992: 11):

At the Universidad Javeriana we have recently created the Amerindian Biological Bank that seeks to collect and store all of the biological samples that have been gathered during the process of Human Expedition 1992. These samples are of special scientific importance given how difficult it is to obtain them and how rare some of the found genetic disorders are. For this reason, they will be made available to anyone who has a research interest that has not been covered by the expedition's work. The Bank has a collection of nearly 2000 plasma and hemolized samples, and shortly we will make our sample catalogue public, along with a description of the biological characteristics that we have studied. A very interesting aspect of this Bank will be the immortalization of studied individuals' lymphocytes, which will enable



us to use live cells even years after the Human Expedition 1992 project concludes. (*Boletín Expedición Humana* 1992, November 1990, 1)

A year later, Alberto Gómez wrote the following: “One of the projects currently under way is what we have called the American Biological Bank. This project sets out to provide a safe storage place for the representative organic samples of the three races that make up this program” (1991: 8). Just a few years later, the existence of the bank, as well as the collection practices associated with it, would become the object of a fierce debate that was initiated by the indigenous movement and directly involved the Human Expedition program.<sup>10</sup>

The myriad research projects that emerged out of the Human Expedition program are one of its most notable results. Although some of these were undergraduate and master’s theses, most of which remain unpublished, many of them (including some of the theses) have been published as books and articles. In his book *Al cabo de las velas: expediciones científicas en Colombia S. XVIII, XIX y XX*, Alberto Gómez Gutiérrez (1998) presents an annex with a detailed list of all the research project results linked to the Human Expedition (both published and unpublished). These studies range from (clinical and population) genetic research to the medical and biological sciences. There is also a much smaller number of research projects in other disciplinary fields.

Population genetics is one of the most productive research lines of the Human Expedition program and perhaps where its most ambitious expectations were placed. A national newspaper, for example, wrote, “From the findings [of the Human Expedition] the country’s genetic map and human geography will be outlined, enabling us to develop a clear idea of that other nation that is also Colombia” (*El Tiempo*, 1 February 1993, emphasis added). Although we can’t really say that the program outlined a genetic map of the country, some of the elements necessary for its creation were produced. Some of the publications that stemmed from the program present aspects of population genetics among indigenous and black populations (the latter were done in Chocó and Providence Island). In some instances, these cases are contrasted to one another and in others they are contrasted with “mestizos,” “colonos,” and “Caucasoid” groups (the categories of classification that were used are discussed in detail below).

For academics and activists interested in the study of black people in Colombia, the publication of the journal *América Negra* was perhaps the most visible result of the Human Expedition program. In August 1990 the journal’s first issue—which was initially titled *América Negra y Oculta* (Black and Hidden Americas)—was publicly announced. A year later, on 4 July 1991, the first issue



of *América Negra*, edited by Nina S. de Friedemann, Jaime Arocha, and Jaime Bernal, was officially presented. The Universidad Javeriana and the ICFES (Colombian Institute for the Evaluation of Education) publicly announced their commitment to financially support the journal. A total of fifteen issues were published between then and December 1998.<sup>11</sup> The journal was an international publication that accepted “manuscripts from any of the disciplines dedicated to the description of human populations, and that place particular emphasis on black and indigenous communities in the Americas, and on their relations with populations in other parts of the world” (*Boletín Expedición Humana* 1992, August 1990, 4). Over the years, a large number of the findings from the research projects associated with the Human Expedition program appeared in the pages of *América Negra*.

Other, less visible publications included the series *Terrenos de la Gran Expedición Humana* (Terrains of the Great Human Expedition), which printed a dozen books with results from investigations in the Human Expedition 1992 and GHE programs. Another publication was the series *Artes y crónicas de la Gran Expedición Humana* (Arts and Chronicles of the Great Human Expedition), which produced four issues, a CD titled *Itinerario musical por Colombia* (Musical Itinerary through Colombia), and the book *Diseño indígena* (Indigenous Design). Also, the Human Expedition program participated in the recently created Latin American Association of Biological Anthropology, the official publication of which is the journal *Antropología Biológica*. By 1992, Jaime Bernal was the association’s secretary and the Universidad Javeriana’s Press published the first issues of *Antropología Biológica* with Jaime Bernal as the journal’s editor in chief.

In a letter addressed to Luis Guillermo Vasco, a professor at the Universidad Nacional, in response to a debate that had been unleashed regarding the genetic work of the Human Expedition program, Bernal presents an overview of the program’s achievements as well as a description of the general framework within which it operated:

I think that our research has enabled us to make a thorough diagnosis of the precarious nutritional, educational, health, dental, etc. situation of many of the country’s most isolated communities (which we have disseminated at all levels and which is essential information to put in practice actions that adequately respond to these people’s needs); to reveal, together with the studies performed by other researchers such as Dr. Emilio Yunis, our people’s past, to cultivate a curiosity about the importance of our ethnic wealth (through





expositions of our artists' works, publications, student presentations, etc.); to generate and support the furthering of knowledge production regarding Afro-Colombian populations in the national and universal contexts (this last intervention was done through the publication of *América Negra* and our participation in multiple forums of various nature); and finally, to show the marvelous biological and cultural diversity of our country, which I have personally presented, as well as many of the rest of the project's participants, before numerous international and Colombian audiences, and in which I usually underscore the need to know ourselves if we want to live in reasonable harmony, because we cannot love that which we do not know, and we cannot tolerate what we don't love. (Bernal 1996: 6)

This summarizes the way in which the creators of the Human Expedition as well as its many associated expedicionarios saw the work they were doing. In their view, this was not a narrow genetic science endeavor, but one that sought to reveal the true history of the nation as well as the cultural and biological wealth that was contained in its diverse human populations.

#### Nation and Difference

Nina S. de Friedemann, a renowned Colombian anthropologist who had been doing research among black populations in different parts of the country since the 1960s, joined the Human Expedition's team in the early 1990s. For Friedemann the Human Expedition was an opportunity to continue overcoming what she called the "invisibility" of "black groups" in Colombia (Friedemann 1984):<sup>12</sup> "Within the university realm, black groups cry out for the creation of specific educational and research programs comparable to those of the Indian ethnic group, which have never been heeded by the same institutions that teach anthropology as a science that seeks to explain man. . . . Fortunately, this demand, made by black groups in Colombia, was heard by the Universidad Javeriana's Genetic Unit, within the context of a research program that honors its title, *In Search of the Hidden Americas*" (Friedemann 1990: 1, emphasis in original). In addition to the contrast between "black groups" and "the Indian ethnic group," which appears to reproduce a clear racial distinction (black/Indian), this quotation demonstrates that Friedemann's enthusiastic participation in the Human Expedition must be understood within the context of her disputes with the anthropological establishment and her efforts to position the study of black groups within it, making visible their historical and cultural presence



and their contributions to the nation: “In all, this project’s most important accomplishment within the trajectory of the Human Expedition 1992 . . . is the incorporation of black groups as suitable subjects of study of *The Hidden Americas*. The marginalization that black groups have suffered within the university and the realm of research will begin to decrease” (Friedemann 1990: 1).

Friedemann’s concrete expectations of the Human Expedition are clearly stated in her presentation of a research project in which she participated directly, titled *Ethnomedical and Genetic Profiles on the Pacific Coast*:

This interdisciplinary anthropological-genetic and pharmacology project constitutes an effort to understand the ethnomedical perspective of black groups on the coast, in the field of genetic pathology. Following this, we consider it viable to undertake an emic/etic interpretation of bioscientific concepts and methods. Of course, when the project was designed we kept in mind the possibility of examining some of the reasons that explain the Indian-black demographic asymmetry on the [Pacific] coast. Living in a strange environment and under the yoke of several centuries’ of slavery, blacks survived to such an extent that they changed the face of the coast from aboriginal to black. . . . The knowledge of the genetic structure of these groups could offer some clues to answer this question. Similarly, it offers the possibility of tracing some of this population’s origins ranging from the African diaspora to the results of internal migration processes across the country and regional agglutinations. (Friedemann 1990: 1)

Friedemann’s hopes of using genetic studies to trace the specific origins of African-descended populations as well as to identify kinship lines and genetic distances were founded on claims of the geneticists of the Human Expedition. For example, one of her colleagues in the project in Chocó, the molecular geneticist Ignacio Briceño, wrote:

According to Germán de Granada’s [sic] linguistic analyses, the origin of the inhabitants of the Pacific coast is Fantiasanti. Edward Bendix and Jay Edwards note that the San Andrés and Providence archipelagos have the same influence, and Carlos Patiño Roseli [sic] points out that the creole language of Palenque de San Basilio has elements of the Congo and Angola languages. Using studies of genetic markers that are found in HLA, the Human Expedition will contribute objective biological evidence that can help elucidate the genetic composition of these groups, and with it to highlight the biological and cultural identity of the Colombian people. To this end, we are doing



investigations in Chocó, where the samples taken will be compared with studies of Providence currently underway, and with those that are done in the future. (Briceño 1990: 4)

Jaime Bernal also highlighted genetics as a source of information for tracing the historical processes of settlement of the country's populations. For him, genetics allowed historians and linguists to paint the picture of "our country's" history and prehistory with a finer, though complementary, brushstroke than the one they had used until then. This is evident in the following excerpt, where Bernal explains the dazzling terrain of science to neophytes:

Thanks to new technologies, biology allows us to bring our country's history to life in order to understand it and make it our own. Now, in order to do all this we need to study the genetic structure of each of these groups from different angles. Ranging from the simplest to the most complex, we want to typify them in order to know their blood groups, the variations in their serum and red blood cells, the different forms in which the HLA antigens are present, and finally, their variations in DNA sequence, both in the nucleus and in the mitochondria. All of these data enable the production of mathematical models of the relationship between different human groups in order to construct dendrograms or phylogenetic trees, which, interpreted in the context of known cultural or linguistic facts, can yield that coherent vision of our country's prehistory that we search for. (Bernal 2000: 14)

For several of the authors associated with the Human Expedition, the study of human (biological and cultural) diversity was urgent: in their view, this diversity was at risk of disappearing in the face of technological transformations and the accelerated mestizaje (or race mixture) that confronted these isolated communities. One of the arguments for the creation of a human biological bank was stated in the following terms: "The conservation of all of this biological patrimony is truly urgent, given that the different ethnic groups run the risk of being diluted amid the progressive mestizaje of these cultures" (PUJ 1992: 16). In a research proposal presented to the state science funding agency Colciencias, Bernal explained the project's relevance by protesting the impending disappearance of isolated indigenous populations:

It is no mystery that the populations that inhabited our continent before Columbus's arrival have gradually become extinct, whether through acculturation and incorporation to cities and towns, or due to the high morbidity



and mortality of infectious diseases and malnutrition that followed the disruption of their habitat wrought by “white” colonos. The medical and genetic study of these populations is therefore urgent, and this becomes even clearer when we consider that indigenous settlements in other parts of the continent have been the object of these kinds of studies for over twenty years and meanwhile nothing similar has been carried out in Colombia. (Bernal 1991a: 3)

This sort of salvage genetics is heir to the anthropological anxiety of the middle of the twentieth century, which was concerned with the seemingly evident disappearance of traditional indigenous groups.<sup>13</sup> This anxiety was the driving force behind countless salvage ethnographies that, in the name of science and humanity, sought to create a register of those populations that allegedly were disappearing. In anthropology this discourse was deeply questioned, but in the Human Expedition it seemed to reemerge with a new face and in a different register as an argument substantiating the need for clinical and population genetics research. Just as in the 1940s anthropologists saw modernization as the culprit of the loss of traditional ways of life, for the scientists of the Human Expedition the homogenizing effects of globalization played an analogous role in killing cultural diversity:

In the first case we will reflect upon the conceptual wealth in each visited community in order to understand the importance of cultural diversity in a society that is subjected to homogenizing pressures such as those posed by the means of social communication that we call the Internet. It is possible that, in a few years, the advances of technology will place this medium in the hands of the majority of the planet’s population, in a similar way to what has occurred with radio and television. When this happens, the great diversity of the Earth will be reduced to a few displays in museums that will show how in earlier times people were very different from one another and how this difference enriched humanity like colors and sounds enrich the landscape. This sad futuristic prediction fills us with the necessary enthusiasm to continue along the path that was traced by the Human Expedition, which is to collect elements that highlight the diversity that still exists today. (Gómez Gutiérrez 1998: 145)

As anthropological studies of globalization have shown (cf. Ina and Rosaldo 2002), things are much more complex than is suggested by these apocalyptic readings of the ineluctable threat of cultural homogenization. Nonetheless,





these kinds of representations of imminent danger dovetailed perfectly with the arguments that justified the Human Expedition program's existence: "This is how, aided by the numerous eyes of experts of many disciplines as well as students in training, this last expedition of the twentieth century seeks to describe the characteristics that make these isolated communities attractive not only to the taxonomist or the brainy anthropology student but to any human being" (Gómez Gutiérrez 1998: 27).

In their view, Colombia's human diversity was predominantly found in those remote places where "unknown Colombians" lived. "The search for the hidden Americas," then, meant undertaking the work necessary to reveal that hidden Colombia, the Colombia of "isolated communities," of "inaccessible geographies," of "remote times." During the closing event of the GHE, held on 27 September 1993, Bernal stated, "The Human Expedition has transcended more barriers in order to put us in contact with the other Colombia, the Colombia of Colombians that we don't know, the Colombia that travels by foot, by mule, or by boat, the one that cannot know airplanes, and for whom the only experience of state presence is a teacher who shows up and doesn't stick around" (1993: 155). "The search for the hidden Americas" denotes a tone of scientific discovery of the realities that had been kept hidden and that required the mediation of the scientist's expert knowledge to surface and be recognized.

Within this framework, diversity was understood to exist predominantly in "isolated communities" that could only be accessed by crossing long distances and overcoming the most varied vicissitudes and adventures. In a place other than the lab, in the antipode of spaces and peoples transformed by civilization, is where we could find those isolated communities, which were seen as both the source (the constituent elements) and the prior historical moment of "genetic and cultural mestizaje." Gómez described this as Bernal's effort "to bring together a greater and greater number of research initiatives centered on the main premise of leaving the classroom in order to arrive at the remote places where thousands of people, who have been unable or unwilling to integrate into dominant civilization, have found refuge; and who hold the source of our genetic and cultural mestizaje" (Gómez Gutiérrez 1998: 133–134).

In these remote geographies, which signal the existence of unknown peoples, one can decipher the clues of the real country, the "deep Colombia." Although this sounds similar to Bonfil Batalla's (1996) well-known notion of a "deep Mexico," which he contrasts to an "imaginary" Mexico that is modeled on European modernity, the two concepts are not analogous. For Bonfil Batalla, the indigenous cultural grid is the source of true Mexicanness, and



all Mexicans possess it even though it is generally implicit, lying inadvertently and constantly suppressed. For the Human Expedition, “deep Colombia” is not lodged within all Colombians, nor is it at the heart of a mestizo Colombian-ness. Rather, it is another, historically prior and therefore static nation, which continues to stand on the margins of mainstream Colombia, the modern Euro-Andean nation that, due to its dominance, does not need to be investigated and described. According to the academic vice president of the Universidad Javeriana, who made the following statement during the Human Expedition program’s most effervescent moment, this project sought “the rediscovery of the contemporary national self”: “Today, sixty researchers belonging to the most diverse set of disciplines scatter across the fragmented map of Colombia in order to sketch its genetic, social, cultural, political, and economic reality. The expedition visits the most remote places, makes a map, compares it to others, integrates it and publishes it. In this way, a new map of the true country, its living society, is being constructed” (Sanín 1992: 7–8). At the height of the program’s activities, a national newspaper described the project using the language of “the other nation,” the hidden Colombia. The article, via the Human Expedition’s own discourse, portrayed a nation with an extraordinary ethnic wealth, which could be found in those remote rural areas that are closer to nature and have remained environmentally and morally uncontaminated. In brief, it presents us with a rearticulation of the discourses of the noble savage and pristine nature:

Colombia is not only the country of the *paisas*, the *costeños*, or the *cachacos*.<sup>14</sup> Nor is it the land where environmental pollution, indifference, and intolerance reign. It is also the second richest country in ethnic diversity in the world, with more than eighty ethnic groups and communities of African, Asian, and European origin. Many of them make up the other nation, the one that is used to traveling by foot, by mule, by motorboat; to laying their bare feet on the soil, feeling it, and therefore caring for it. The one that loves nature, the ocean, water. . . . In that other nation there are places that have not yet been polluted. In fact, they make the great landscape, the main reason to live amid pure air, nature, and its gifts. There are towns where envy and deceit are unknown; where people live calmly and work hard. Although they suffer, because few people outside of their communities are aware of their existence . . . Expedición Humana, their project, has been taken up by the Universidad Javeriana and its director geneticist Jaime Bernal Villegas. Its purpose is, precisely, to rediscover and raise awareness about that other Colombia. (*El Tiempo*, 1 February 1993)



The emphasis on isolated communities went beyond the Human Expedition's national interests and resonated with the project's international partners. The Human Expedition's joint project with the Academia Real de las Ciencias Exactas Físicas y Naturales in Madrid, for example, also "centered on the detection and study of biological markers" in "isolated populations" in Mexico, Venezuela, Chile, Argentina, and Colombia (*Boletín Informativo Expedición Humana* 1992, July 1989, 4). This joint research project continued until 1994, suggesting that the attention to isolated communities—understood as expressions of biological diversity—in defining units of analysis that explained particular national formations was not a particularity of the Human Expedition program.<sup>15</sup> In the end, what was at stake in the program was the strengthening of national identity through the molecular examination of the Colombian population (Gómez Gutiérrez 1998: 201). From the geneticist's perspective, this meant mapping the genetic composition of the Colombian population, even if initially this focused on "isolated communities." Gómez pointed out that "one of the paths outlined by the Human Expedition's director was to produce the genetic map of Colombia." For him, "this meant that, taking a sufficient number of representative samples from various national ethnic groups, one could hypothetically construct a global chart of the genetic content of our population" (Gómez Gutiérrez 1998: 148).

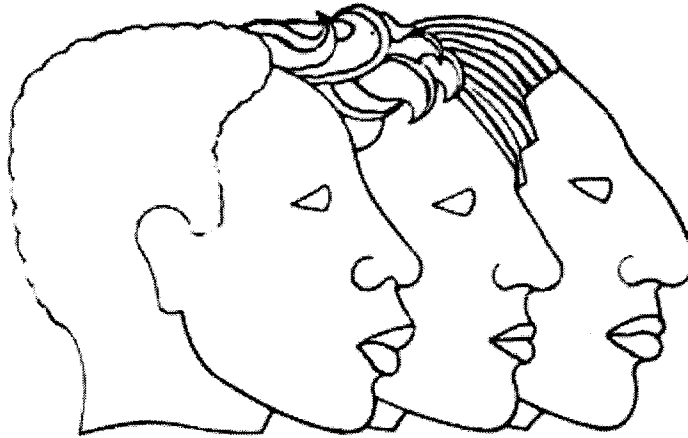
For the Human Expedition's geneticists, the recognition and valorization of the Colombian population's enormous diversity was a key way to strengthen national identity. During an interview that Nina S. de Friedemann and Diógenes Fajardo conducted with Jaime Bernal in 1993, Bernal made this quite explicit:

NSF: Is the search for diversity the main justification, the point of departure for the Human Expedition?

JB: Yes, this is how it was born. In order to observe Colombia's amazing diversity, the second richest one in the world. Here [in Colombia] the geneticist has an exceptional paradise at his disposal. This is due to its ethnic variety and the possibility of understanding it, seeing it, perceiving it from various angles that range from its visual appearance to its genetic structure. . . . In essence, we geneticists are searching for the cause of diversity. Why are we different? How does it make sense for us to be different? What are those differences and how do they impact our ways of living? (Friedemann and Fajardo 1993: 211)

The second most diverse country in the world, the geneticist's paradise due to its ethnic variety, which is expressed on the body and is visible to the naked eye or observable in the genes and therefore legible only to the expert—diversity,





## EXPEDICIÓN HUMANA A LA ZAGA DE LA AMÉRICA OCULTA

Figure 2.1. The Human Expedition's logo.

in Bernal's view, is a fact that must be explained through the deployment of genetic knowledge, even if not through it alone. In his account of the Colombian nation, diversity is glossed over as "ethnic," and "indigenous communities" and "black groups" are its embodiment par excellence. Black and indigenous populations were made synonymous with isolated communities, which functioned as the program's main referents of diversity. This conflation, which was implicit in many cases, is crystal clear in a quote from Gómez: "The Human Expedition frequently travels to meet with our country's isolated populations, mainly black and Amerindian ones" (Gómez 1992: 10).

Up until the late 1980s, the notion of human diversity was also easily translated into a racialized classification of blacks, mestizos, and indigenous people.<sup>16</sup> Thus, for example, the Human Expedition's logo (see figure 2.1) is an allusion to this racialization of difference. We see the profiles of three men (not women, not children) next to one another in order to highlight certain somatic markers (such as hair texture, the shape of the nose, the eyes, the lips). The different figures are intended to represent, somehow "obviously," an indigenous face, a white one, and a black one. The logo's racialization is occasionally made explicit: "This project [the American Biological Bank] sets out to provide a safe





storage place for the representative organic sample of the three races that make up this program” (Gómez 1991: 8, emphasis added).

The logo was first used in July 1989 as a header for the second issue of the program’s newsletter, *Boletín Expedición Humana* 1992. Its creation was announced in the following way: “At the head of this newsletter is the expedition’s new logo, which was kindly designed by Maestro Antonio Grass, who captured and represented the central idea of the project in a way that is simply unbeatable” (p. 4). The Human Expedition logo was created before the 1991 Constitution’s multicultural effect was felt, and it was conserved throughout the duration of the program and in publications such as *América Negra* up until the journal’s disappearance in 1998.

The role of race in the categories used by the GHE is illustrated further in a publication titled *Demographic Aspects of Indigenous, Black, and Isolated Populations Visited by the Great Human Expedition*, in which three expedicionarios make reference to the methodology that was used to collect field data. For the purposes of the GHE, a survey that operated as a genetic research protocol was designed. Mendoza, Zarante, and Valbuena state that the research instruments were the result of “meetings with various working groups of the participating research projects so that the questionnaire that was filled out during each visit could adequately respond to the needs of each group” (1997: 23). These surveys, which were accompanied by sample collection, asked for respondents’ names, age, sex, and place of origin, which should be specified by “indicating the community, population, or municipality that they came from” (25). Interestingly, they also asked for the respondents’ racial group: “Racial Group: In this section we identified the group to which each individual belongs, whether *indígena*, *mestizo*, *negro*, or *colono*. All individuals who had an indigenous ancestor in the first degree of consanguinity were classified as *mestizos*, and individuals who had no knowledge or documentation of indigenous relatives were classified as *colonos*” (25). What stands out here is the use of the category “race,” with the inclusion of *colono* as a racial group, defined apparently by migrant status (settler or colonist), but in practice defined by the perceived absence of indigenous ancestry and thus implicitly white. The ambiguity of the notion of race is evident here, alongside its profound roots in notions of ancestry.

### Yunis and the Regionalization of Race

As we have mentioned, in the 1990s other population genetics research projects were under way in Colombia. Most notably, Emilio Yunis Turbay, one of the founding figures of genetics in Colombia, carried out a study of more than



60,000 individuals who had paternity tests done at the ICBF (Colombian Institute of Family Welfare) between 1975 and 1992. Taking an individual's birthplace as a signal of geographic origin, this study analyzed "eight genetic systems that group 23 allelic genes, all of them blood groups distributed across the national territory according to the origin of each individual" (Yunis Turbay 2009: 94).

These studies focused on tracing the *mestizaje* that had taken place in Colombia, showing how the proportionality of mixture changed in each of the country's regions: "The genetic nonhomogeneity of the Colombian population is evident, as is the patchy distribution of different ethnic components, which shows beyond any doubt the existence of regions that can be differentiated by their genetic-racial composition. These regions have been differentially and racially valued" (Yunis Turbay 2009: 94). This is a view of Colombia as a "racial mosaic" and signals a clear regionalization of race. For Yunis, these studies "showed a mosaic-like distribution of [genetic] contributions, which can only be interpreted as the result of an exclusive and oppressive process of admixture (*mestizaje*) that was anything but open and spontaneous." And this pattern was interpreted as evidence that "*mestizaje* was a 'regionalization of race'" (Yunis Turbay 2009: 312).

In his book *¿Por qué somos así?* (Why Are We Like This?), Yunis presents a set of maps that give an account of the "genetic structure" of the Colombian population. These maps, which are divided according to each of the five "natural regions," show the percentages of black, Caucasian, and indigenous components in each region of this mixed Colombia. Yunis argues that "the Colombian mosaic, in terms of the genetic contribution of the three ethnic groups considered—black, indigenous and Caucasian—takes on its clearest expression when we consider its contribution to the different political regions in which the country is divided" (Yunis Turbay 2009: 88–89). In a prior book titled *¡Somos así!* (This Is What We Are Like!) he stresses, "Colombia is a genetic mosaic as a result of a selective process of *mestizaje* and regionalization of race. And for this reason in the country we have black areas, areas of mulato preference, of indigenous mestizo predominance, areas that have represented themselves as white, alleging a pretense of racial purity" (Yunis Turbay 2006: 289).

In a chapter titled "On the Origin of the Colombian Population," cowritten with his son José Yunis Londoño, Yunis makes reference to new research in population genetics. Specifically, he details studies of Y chromosome haplotypes and mitochondrial DNA, not only to reaffirm his argument that the genetic components that make up mestizo populations vary depending on



geography, but also to explain how maternal and paternal ancestries differ. When referring to the paternal ancestries of “Amerindian,” “Afrodescendant” (from the Chocó region), and “Caucasoid” populations of the Andean region, Yunis identifies very little Caucasoid influence for the first two. Meanwhile, he states that in the “Caucasoid population of the Andean region” there is “a predominance of European Y chromosome haplotypes, mainly of Spanish origin, and which correspond with the regions of Andalucía, Castilla, and Extremadura, while the contribution of Afrodescendant and Amerindian lineages is very low” (Yunis Turbay 2006: 271). Regarding the components of the “Amerindian population,” he states that “there is a very small contribution of Caucasoid and Afrodescendant populations.” And for the Afro-Colombian population of the Chocó, “the findings show that paternal lineages have been conserved as African-origin lineages, with very small contributions of Caucasoid and Amerindian populations” (271). In sum, the markers of paternal ancestry of these different “populations” differ considerably.

Based on mitochondrial DNA analysis, Yunis (2006: 288–290) identifies the frequency of Amerindian mitochondrial haplogroups in “mestizo populations” in eleven departments as well as “mitochondrial haplogroup L, which identifies African-origin mtDNA” in the same departments.<sup>17</sup> He concludes “that there is a predominance of the Amerindian trace in all of the regions of Colombia, ranging from 73.9 percent to 96.5 percent, with a general average of 85.5 percent, which means that the mitochondrial DNA transmitted by present-day Colombian mothers is mostly Amerindian. The contribution of other mothers is minimal” (289). Regarding the component percentages found in the African-origin mitochondrial haplogroup, Yunis remarks, “Clearly the arrival and imposition of slavery is of great significance, again, because of the selective and oppressive process of *mestizaje* that it established in the black population. This is the reason why the contribution of black mothers, via mitochondrial DNA, is reflected in the corresponding graphic, which shows—from the perspective of molecular transmission from mother to child—regional differences that are evident to anyone that knows the country in even the most basic way. These results must be interpreted in relation to the existence of [gold] mines, *palenques*, *zambo* populations, among others” (289).<sup>18</sup>

In the narratives that we have examined, it is clear that Yunis conceives of the relationship between nation and difference through the notion of race and the idea that it is regionalized. He argues that there exist “mestizo populations” that vary geographically according to the different proportions of the three ethnic components or races (Caucasian/European, black/African, indigenous/Amerindian) that historically inhabited each region. From this, he elaborates



a notion of “Caucasian mestizos” or “mestizo-Caucasian population” (e.g., Yunis Turbay 2009: 130, 131). However, it is not clear whether the Amerindian and Afrodescendant categories that Yunis identifies also fit into his differentiation of mestizo populations.<sup>19</sup> According to Yunis, the nation’s mestizo populations are spatially differentiable. Regions and departments, for example, are the embodiment of the historical processes whereby differentiable racial markers became emplaced. Moreover, the histories of each population’s ancestry markers are gendered. For example, while the presence of European markers is overwhelmingly associated with fathers, and mothers’ markers are mostly indigenous and African, these numbers change from place to place. Thus, the gendered composition of ancestry varies as we shift our gaze from “Colombian Amerindian populations” to “Afrodescendant populations from Chocó.”<sup>20</sup>

### Violence and Forensic Genetics

Nowadays, many of the university laboratories that do population genetics or genetic anthropology support their research with work that they carry out in medical and, now most prominently, in forensic disciplines. This shift toward forensic genetics in Colombia is the result of the escalation of the armed conflict at the end of the twentieth century. Although in the last decade human genetics research in Colombia has changed substantially, in both its orientation and technology,<sup>21</sup> the regionalized grammars of difference that Yunis (2006) depicts, and some of the ideas about isolated communities born in the GHE, continue to shape its horizons.

At the dawn of the twenty-first century, initiatives such as Plan Colombia ignited a renewed interest in forensic science, resulting in the arrival of new standards and technologies of genetic research in order to identify victims and perpetrators of violent acts.<sup>22</sup> In this scenario, individualized forensic identification has been a driving motivation of the search for molecular differences among Colombians.<sup>23</sup>

The famous CODIS (Combined DNA Index System) used by the FBI in the United States, which integrates DNA technologies such as microsatellite repetitions to identify bodies, was one of the first scientific contributions of Plan Colombia. Within this forensic field, Manuel Paredes, a student of Yunis, was the first geneticist to create a forensic lab for criminology purposes inside the Instituto de Medicina Legal (Legal Medicine Institute) in 1993. Also, expedicionarios such as Bernal and Zarante helped create a forensic genetics lab within the national police and trained the first generation of criminal investigators.





Emilio Yunis continued his work on forensic genetics at the ICBF until the beginning of the twenty-first century and then continued doing forensic genetics work for his own private laboratory. As a consequence of the volume of genetic tests needed for both civil and criminal cases, and the public importance of such work, forensic genetics has become a new site for competition and dispute among genetic experts (see Schwartz-Marín et al., 2013). However, without a doubt the work and standards produced by the genetics laboratory at the Colombian Institute of Legal Medicine have had the upper hand, becoming the referent against which all other identification processes in the country are measured.

In Colombia, the CODIS has been tailored to identify human remains, suspects, and victims according to their geographic origins in four populations: two populations of African descendants from the Pacific and Caribbean coasts, mestizos from the Andean region, including the Amazonian and Orinoquian regions, and a southwest Andean region with an “important Amerindian component” (Paredes et al. 2003: 68). Although the DNA markers used by the CODIS database are the same regardless of country or forensic system, the boundaries of what legitimately constitutes a population differ from place to place. What is striking for Colombia is the production of genetic difference by forensic disciplines in a way that emphasizes the notion of a country of racialized regions, which are apparently clearly distinguishable in terms of allelic frequencies.

The dominant investigations in population genetics, many of them in the last ten years done from a forensic perspective, deepen the national common sense of a racialized and regionalized Colombia.<sup>24</sup> Moreover, these imaginaries have become naturalized and standardized as a tool to order the whole range of forensic genetic inquiries in the country. In practice this means that every time the forensic system receives a new sample for analysis, it is classified according to the four racialized populations described in Paredes et al. (2003). Thus the Colombian forensic system can be seen as a machinery in which the imaginaries of difference that have been historically intertwined with genetic science become reproduced and reinforced with unprecedented scale and public importance.

### Conclusion

While the Human Expedition looked at isolated communities in order to draft the genetic map of the Colombian population, the working group led by Yunis was carrying out the “first great study of mestizaje in Colombia” (Yunis Turbay



2009: 94), emphasizing the varying percentages of black, Caucasian, and indigenous components according to geographic divisions (regions), political administrative units (departments), and other spatialized historical processes (e.g., colonization). In both cases, they were investigating molecular diversity, a particular kind of diversity that cannot be perceived by the naked eye and therefore requires the competence of genetic and genomic knowledge and technology. For them, isolated communities and the spatialized variations of mestizo populations were the privileged sites of analysis to understand molecular diversity and the building blocks with which the Colombian nation was imagined.

Despite their differences, in both cases national molecular diversity was racialized and spatialized. On the one hand, in the work of Yunis and his collaborators the use of the term “race” and its regionalization are explicit. His work, first with blood markers and later with ancestry markers (haplogroups) in mitochondrial and Y chromosome DNA, operates with a racialized logic that is transparent in the very terms that are used to describe difference: Caucasian/European, black/African, indigenous/Amerindian. On the other hand, in the Human Expedition program, although there were occasional explicit references to race, some of the project’s participants now publicly reject the concept (Gómez Gutiérrez, Briceño Balcázar, and Bernal Villegas, 2011).<sup>25</sup> Nonetheless, as we have shown, there are clear instances of the open mention of three races and implicit but obvious references to race, as in the program’s logo. Given the Human Expedition’s particular history and affiliations (to Nina S. de Friedemann, to name one), in its publications and internal documents we can see the burgeoning discourse of multiculturalism being used much more often, replacing the term “race” with more politically correct references to “culture” and “ethnicity.” We are not arguing that the Human Expedition or Yunis engaged in genetic reductionism, a practice that they have explicitly and repeatedly opposed. Nor do we attribute to them the kind of racial thinking that was characteristic of the early twentieth century, which established direct correlations between a population’s biological characteristics and its specific behaviors and intellectual or moral capacities. However, if we search for processes of racialization that do not require the explicit iteration of the term “race,” we can see that the concept of race appears every time that discrete categories of difference are mobilized and a distinction is made between indígenas, negros, and mestizos. In this sense we can state that there is a clear racialized articulation of difference, independently of whether the word “race” is mentioned.

The spatialization of difference is also a central trope in the genetic imag-



ination of the Colombian nation. In the Human Expedition program, the very idea of an expedition—that is, the pressing need to travel to remote places that remain hidden and must urgently be discovered by the gaze of the scientist—evidences a geographic imaginary of difference. Likewise, for Yunis and his collaborators, mestizo populations are not all the same, given that they have been historically marked by a fragmented geography of natural regions that has resulted in a clear spatialization of racialized difference.

### Notes

- 1 The historical narrative of this chapter was put together through the accounts of Colombian geneticists in Medellín and Bogotá in the following universities: Universidad de los Andes, Universidad Javeriana, Universidad Nacional, and Universidad de Antioquia. In addition, we incorporated the accounts of geneticists who work in state institutions such as the Instituto de Medicina Legal, Instituto Colombiano de Bienestar Familiar, and the National Police.
- 2 The work of Dr. Hugo Hoenigsberg (from Uniandes) and Dr. Margarita Zuleta (from Universidad de Antioquia) actually predates Emilio Yunis's pioneering studies of clinical and population genetics in Colombia. However, neither of them initially did human genetics, instead focusing on fruit flies. Margarita Zuleta had studied population genetics with Hermann Muller (Nobel Prize, 1946), and, according to Dr. Gabriel Bedoya, she could be considered one of the first population geneticists in Colombia.
- 3 The lab's web page used this wording in 2012 (accessed 28 October), but it has since been changed to refer to "different Colombian populations" (Laboratorio de Genética Humana 2013).
- 4 The Human Expedition program, however, did not establish direct ties with either the Human Genome Project or the Human Genome Diversity Project. In an interview, Jaime Bernal emphatically stated, "There is absolutely no relation with the HGP or the HGDP . . . not only do I have nothing to do with them, but I have consciously avoided having anything to do with them; before the debate began, at a geneticists' meeting in Rio de Janeiro a few years ago, they were about to name a commission of Latin American geneticists to be on the board of the Human Genome Diversity Project and I left the conference because I knew that if I stayed I would be named to be on that commission and I was not interested in participating in that" (interview cited by Ramos 2004: 15).
- 5 A publication from 1994 lists the "national and foreign institutions" with which the institute collaborated (Bernal and Tamayo 1994: 39, 41). The foreign ones include institutions in the United States, France, Italy, Portugal, Spain, Scotland, and England. One of the researchers of the Human Expedition program, Genevieve Keyeux, was a member of the UN's bioethics committee.
- 6 In fact, one of the volumes of this collection is titled *Variación biológica y cultural en*



Colombia (Biological and Cultural Variation in Colombia) and presents the most direct results of the Human Expedition program in twenty-nine chapters that cover a very broad range of themes, some of which had already been published in other places such as the journal *América Negra*, which was the expedition's official publication (Ordóñez Vásquez 2000). The Colombian Institute of Anthropology and History also participated in the collection's design. This institute is the government entity charged with carrying out research projects related to indigenous groups and administering the nation's "archaeological patrimony."

- 7 This same wording can be found in several texts: see for example Bernal and Tamayo (1994: 31).
- 8 This is reminiscent of the notion of marginality, which is culturally and politically constructed in opposition to ideas of an urban, mainstream self. The severance from the mainstream, Tsing points out, is not a flat isolation, but rather a heterogeneous process that is "the source of both constraint and creativity" (1993: 18).
- 9 The university still keeps a copy of a document by Ignacio Zarante titled "Personal Equipment to Travel on a Great Expedition" (Instituto de Genética Humana, Universidad Javeriana, <http://www.javeriana.edu.co/Humana/equipo.html>). The document reveals something about how these trips were imagined and undertaken.
- 10 For a thorough description and analysis of this debate, see Ramos (2004), Uribe (2010), and Barragán (2011).
- 11 The sudden death of Nina S. de Friedemann, in October 1998, interrupted the publication of *América Negra*.
- 12 This is the term that was used to refer to these populations up until the 1990s. After this, they were increasingly referred to as Afro-Colombians.
- 13 Of course, salvage anthropological efforts have a long history that precedes anthropology as a discipline and is heir to the simultaneous destruction and fascination of the Other that was wrought by colonial encounters. Although the term was coined in the 1960s as a critique of colonial practices within the discipline, the logic of salvage anthropology has continued to motivate the collection of cultural (and in this case biological) elements that are perceived to be threatened by the advance of Western civilization. As critical scholars note, its logic continues to reverberate both across time and space (cf. Stephens 1995).
- 14 These terms are used to refer to people from different regions. Put simply, *paisas* are from the department of Antioquia and its surrounding areas; *costeños* are from the Caribbean coast; and *cachacos* are from Bogotá.
- 15 In the April 1990 issue of the Human Expedition's newsletter, *Boletín Expedición Humana* 1992, there is an article titled "Génesis biológica de las nacionalidades hispanoamericanas" (Biological Genesis of Hispano-American Nationalities), which states that the joint research project's goal "is a collaborative effort among several Latin American centers," the goal of which is "to give a general idea of the genetic characteristics of our people" (p. 8). The journal *América Negra* (June 1992) published a list of research projects affiliated with the Human Expedition, which





included a project called Biological Genesis of Hispano-American Nationalities, overseen by Jaime Bernal and the Real Academia de Ciencias Físicas y Naturales de España.

- 16 This classification is racialized even if the term “race” is not explicitly used and despite the insistence that biological race does not exist. It is racialized because it uses historically racialized notions such as *negro*, *indígena*, and *blanco* (or its substitutes such as Caucasian, African, European, and Amerindian) as referents to think about the country’s cultural and biological difference.
- 17 In Colombia, departments are the largest political-administrative units. Chocó is not included among these departments, but rather Meta, Cundinamarca, Boyacá, Nariño, Santander, Norte de Santander, Tolima, Valle del Cauca, Córdoba, Sucre, Atlántico, and Antioquia.
- 18 Yunis is implicitly referring to the historical-geographic patterns of slave labor in Colombia, which centered on gold mining in the Pacific River basin. He is also referring to slave runaway communities or *palenques* and processes of indigenous-black miscegenation in this region that produced “zambo populations.”
- 19 From the maps Yunis presents, it is clear that the population of the Pacific region, including the department of Chocó, has indigenous and Caucasian genetic components, much like mestizo populations in general (Yunis Turbay 2009: 360–366).
- 20 This view echoes two notions that have long histories in Colombia. The first is that Colombia is a nation of regions. The second is that one of the most salient differences between these regions is their racial composition. Together, these ideas amount to a persistent regionalization of race and a racialization of (naturalized) regions, which are heir to environmental determinism, biological racism, and national exceptionalism and have been recurrent, if dynamic, components of the imaginaries of Colombian uniqueness.
- 21 For a discussion of this period of genetic research in Colombia see chapter 5 in this volume and Olarte Sierra and Díaz del Castillo (2013).
- 22 Plan Colombia is a bilateral agreement between the U.S. and Colombian governments, which began in 2000 and still exists today. Plan Colombia provides U.S. funding to support the military in the Colombian state’s twin internal wars: “the war on drugs” and “the war on terrorism.”
- 23 Although paternity tests were being carried out in the 1970s, it was not until the 1990s that the Colombian state’s concern with the escalating war fostered the development of new forensic genetic technologies. Initially, following the passage of Law 75 in 1968, blood groups were employed in paternity cases; in the 1980s new technologies such as HLA began to be used.
- 24 A large number of these research projects are master’s theses from biology or genetics programs at the Universidad Nacional, Universidad Javeriana, Universidad de Antioquia, Universidad del Valle, and Universidad de los Andes. Some of them (e.g., Díaz 2010; Terreros 2010) have been financed by the Instituto Nacional de Medicina Legal y Ciencias Forenses.



- 25 For example, during the presentation of preliminary findings of the research project on which this book is based, held at the Universidad Javeriana on 9 December 2010, Alberto Gómez was emphatic in questioning the relevance of the term “race,” thereby distancing genetic research from any form of racialist reductionism. See also Gómez Gutiérrez (2011).

