

NATIONAL ACADEMY OF SCIENCES

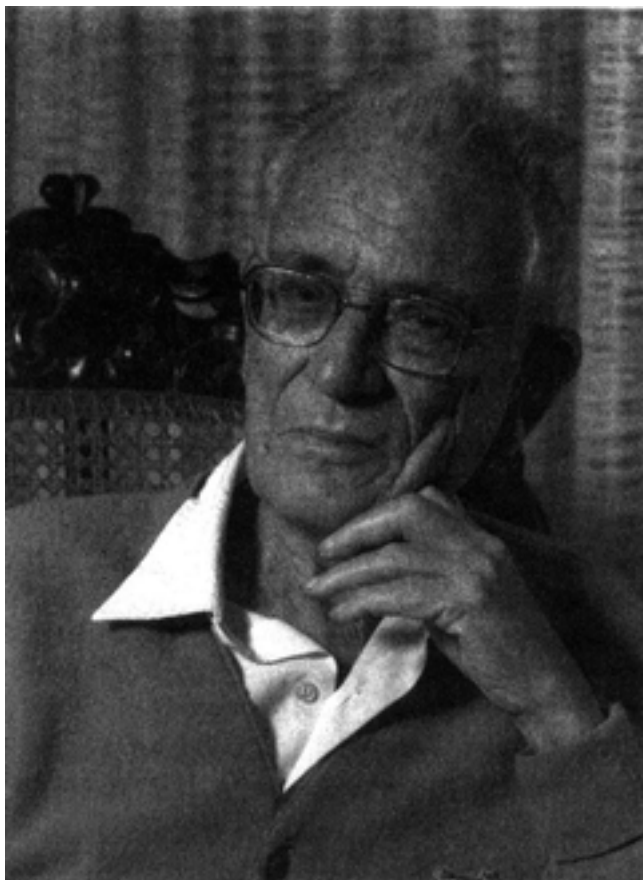
FREDERICK SEYMOUR HULSE
1906—1990

A Biographical Memoir by
EUGENE GILES

*Any opinions expressed in this memoir are those of the author(s)
and do not necessarily reflect the views of the
National Academy of Sciences.*

Biographical Memoir

COPYRIGHT 1996
NATIONAL ACADEMIES PRESS
WASHINGTON D.C.



Copyright by Christopher Hulse

Frederick S. Hulse

FREDERICK SEYMOUR HULSE

February 11, 1906–May 16, 1990

BY EUGENE GILES

WORLD WAR II and its timing impacted Frederick S. Hulse's intellectual trajectory in physical anthropology in a clearer way than it did perhaps any other of the more than two dozen doctoral students mentored in this field over four decades (1913-54) by Harvard University's extraordinarily influential Earnest A. Hooton. Hulse's graduate work was entirely standard in its primary focus on the notion of race being a nominal reality that can be parsed into its historical constituents by a series of observations and measurements on peoples' heads and bodies. He learned, but did not particularly like, another favorite endeavor in the field, human osteology. His only prewar publications¹ were a description of skeletal remains from an archeology site (1941) and an account of the racial origins of the Japanese (1943). Who would have imagined that from this traditional and tardy beginning—his Ph.D. was awarded in 1934—after a brief, war-induced sojourn into sociocultural anthropology, there would emerge from the conventional physical anthropology encrustment, chrysalis-like, another Fred Hulse.

The new Hulse, the one honored by membership in the National Academy of Sciences, saw the integrated way genetics and culture shaped individual human beings that

expressed both. He became an early, and certainly dominant, practitioner of anthropological genetics, conducting research in the United States and a half dozen other countries (mostly Western, a bit unusual for an anthropologist). In his fieldwork he sought and found small human populations that he could use as natural experiments to study, as he once summed up his life work, "the effects of culture . . . upon human biological characteristics and evolution."²

EDUCATION

Hulse was born in New York City in 1906, a son between two daughters, Mary and Charity, of Hiram Richard Hulse and Frances Barrows Seymour Hulse. His father was rector of St. Mary's Episcopal Church. New York was his home and his early education was in its public schools, with summers spent at his maternal grandparents' house in Northampton, Massachusetts, until he was nine years old. The family moved to Havana in 1915 when his father became Missionary Bishop of Cuba. He continued his education at the Cathedral School and then Candler College in Havana, but in 1918 he was sent back to Ridgefield School, a boarding school in Ridgefield, Connecticut. His effort to enter Harvard College on graduation was thwarted by poor scores on his Latin examination, so he entered Williams College. Two years later, unhappy at Williams and having endured a total of seven years of Latin, he was able to transfer to Harvard as a member of the class of 1927.

A pre-Harvard reading of Roland B. Dixon's *The Racial History of Man* persuaded Hulse to give anthropology a try, and, because of his late start, he needed to take all available courses. This led him into the realm of the trio constituting Harvard anthropology in the 1920s, the archeologist-ethnographer-linguist Alfred M. Tozzer, the physical anthropologist Hooton, who was an exceptionally popular

undergraduate teacher, and Dixon (despite its title, Dixon's curious book—he later called it “my crime”—reflected his primarily ethnographic interests). Hulse shared an anthropology major with only one other classmate, Milton Katz, who abandoned anthropology after surviving a Peabody Museum-sponsored expedition through central Africa and went on to a distinguished career as Harvard's Henry L. Stimson Professor of Law. Hulse, however, was captivated by Hooton's intellectual arena, and immediately upon receiving his bachelor's degree *cum laude* entered Harvard's graduate program in physical anthropology.

Hooton initially considered Hulse extraordinarily shy, even drab, but warmed to him in time, and acknowledged that his general examination for the Ph.D. was one of the best in many years. From the beginning Hulse needed financial support for his graduate studies, and although he never held a teaching assistantship at Harvard, Hooton provided him employment in a variety of projects. In 1927 Hooton had persuaded Harvard to enter into an arrangement with Pathé Exchange, Inc., for editing and advice on their educational films involving anthropological subjects. Hooton employed Hulse both as a film laboratory assistant in the basement of the Peabody Museum, the home of the Division of Anthropology (as it was then called), and as a sort of traveling salesman for the Pathé anthropological films in the East and Midwest.

A wealthy Cuban, Madam Rosalía Abreu, developed a primate colony at her estate, Quinta Palatino, near Havana which had reached something close to 100 animals, including chimpanzees, orangutans, and gibbons by the late 1920s.³ Hooton, with support from Pathé, gained Abreu's permission to film her primates for the purpose of better understanding the functional anatomy of locomotion, particularly in chimpanzees. With his Cuban connection through his

parents Hulse was a natural for Hooton to send out to Cuba to supervise filming the primates in a variety of locomotor activities when they were let out of their cages, and he did so.

Cuba also became the focus for Hulse's doctoral dissertation, "The comparative physical anthropology of Andalusians and Cubans," completed in 1934. In his research, which was conducted first in Cuba and then in Spain between 1928 and 1930, Hulse examined some 200 Cubans and 500 Andalusians, taking 17 traditional anthropometric measurements and 40 morphological observations, for the purpose of determining the hoary "racial" categories of the different social and geographic groups in Andalusia and the determination of the effect of the large migration from Andalusia to Cuba. Although contemporary white Cubans were larger than Andalusians, most likely because of environmental changes, he believed that their greater physical similarity to upper rather than lower class Andalusians was due to the effective prohibition of migrants with evidence of Jewish or Moorish ancestry during Spanish colonial times. Hulse received his degree in 1934, but his dissertation remained unpublished until a summary of his conclusions about migration to Cuba appeared 45 years later.⁴

THE EARLY CAREER

To support himself while writing his dissertation Hulse accepted a job working for Harry L. Shapiro, the first of Hooton's many doctoral students. Shapiro, affiliated with the American Museum of Natural History in New York, had Rockefeller Foundation support through the University of Hawaii to study the effect of migration on the physical characters of population groups in Hawaii. Hulse's assignment was to collect the entire anthropometric database for Shapiro's investigation of Japanese immigrants to Hawaii

and their relatives at home in Japan. This daunting task ended up requiring more measurements (43) and more observations (41) on more individuals in both countries (2,594) than his thesis research. The Hawaii portion examined 2.5% of its Japanese population! He completed the field work in 13 months beginning in January 1931. Hulse's data, when analyzed and published by Shapiro,⁵ became one of many studies confirming the environmental plasticity of anthropometric measurements demonstrated years earlier by Franz Boas.

Through Hooton's good offices Hulse had come somewhat under the wing of the eminent anthropologist Alfred L. Kroeber at the University of California, Berkeley. On finishing his dissertation, and having been influenced by his work for Shapiro, he applied for and received a National Research Council fellowship in 1934 to examine Japanese in California to compare with the Hawaiian Japanese. In California he had met and soon married Leonie Robinson Mills in Pasadena on August 26, 1934.

In January 1935 Kroeber placed him on an archeological expedition mounted under the auspices of the university's Institute of Social Sciences to Culiacan, Sinaloa, Mexico, and directed by Isabel Kelly, who had received her Ph.D. only three years earlier under Kroeber and Carl Sauer.⁶ It was the first time in Mexico for Kelly, for Hulse, and for his new wife, who continued to accompany him on all his field trips. As soon as he returned in June Kroeber sent him off to Bishop, California, for the summer to collect oral histories about European contact from the older Native Americans. All of this provided Hulse with valuable archeological and ethnographic research experience. In the fall he went back to Hawaii for a year as a research associate to investigate dietary and other potential differences between Japan-born and Hawaii-born Japanese. By his own admission, how-

ever, the work with the Japanese did not go well either in California or in Hawaii. The good news was the birth of the Hulses' first son, Richard Seymour Hulse, in Honolulu on May 29, 1936.

Hulse got his first chance to teach in the fall of 1936, and with a vengeance. He became an acting instructor (replacing Verne Ray for a year) at the University of Washington in Seattle. Each quarter he was required to teach three introductory courses: ethnology, archeology, and physical and linguistic anthropology. The department chair, Erna Gunther, tried to expand the department and keep him on, but during the depression that was not in the cards. Joining a teacher's union didn't help Hulse with the administration either, and he became unemployed at the end of the academic year. Gunther was able to get him only a couple of inconsequential bits of work and didn't really know how he managed to exist. During this grim period his father died and his second son, Christopher Robert Hulse, was born (March 17, 1938).

Both Hooton and Kroeber as well as Gunther tried assiduously to find Hulse an academic position. It was probably Hooton's urging the Works Progress Administration in Georgia to hire Hulse that finally turned the trick. That one of Hooton's doctoral students, Arthur R. Kelly, had been involved with federal archeology projects in Georgia since 1933 and had just been made chief archeologist of the National Park Service⁷ probably didn't hurt. In any event, in late 1938 Hulse joined the team excavating the Irene Mound site about 5 miles outside Savannah and was principally responsible for the analysis and description of the human skeletal remains uncovered. After two years in Savannah Hulse moved to Atlanta with a promotion to state supervisor of various Work Projects Administration projects. He remained in that position until World War II intervened.

From 1942 until 1945 Hulse served in the Office of Strategic Services, which used his Japanese expertise. In October 1945 he became a member of the Civilian Morale Division of the U.S. Strategic Bombing Survey. The team spent four months in Japan collecting information on morale and attitudes during and after the war by means of polling a random sample of 3,000 Japanese, interviews with selected individuals, and review of available documentary evidence. Analysis took the next five months. Hulse made the most of this opportunity to utilize and expand on his Japanese anthropology. A half dozen articles published between 1946 and 1948 were exclusively cultural anthropology, with titles like "Status and function as factors in the structure of organizations among the Japanese" and "Convention and reality in Japanese culture."⁸ Quite a leap for a physical anthropologist. The articles were read and used in their day, and were thoughtful and balanced, in no way marred by racism or other manifestations of wartime feelings as was some—not most—social science writing at that time.⁹

THE LATER CAREER

Employment opportunities widened for Hulse in the early postwar period. The most solid of these offers were from the University of Arizona and Colgate University. Although he was supported for both by his mentors Hooton and Tozzer at Harvard, they recommended Arizona; ironically, he chose Colgate. In 1948, after two years as an assistant professor at Colgate, Hulse accepted an offer to return to the University of Washington in Seattle, where he was promoted to associate professor in 1949. He found that state law targeted a portion of liquor-licensing fees for medical research, and he was able to tap this source for funding to collect blood samples from several thousand Native Americans for genetic studies. It also supported his later genetic research

among the Italian Swiss in California, a follow-up of his examination of Swiss from the Canton Ticino during his first sabbatical in 1952-53.

A promotion to full professor was among the enticements that lured Hulse to the University of Arizona in 1958, and there he remained until his retirement. Although he had worked with a doctoral student earlier, it was at Arizona that his success in graduate training became evident. He maintained that during his time at Arizona he raised the number of physical anthropology faculty from one to eight, but particularly for the early years, his Ph.D.s in that field were the lion's share. Surprisingly, given his own keen interest in anthropological genetics but only disinterested competence in human osteology, eight of Hulse's nine Arizona Ph.D.s became forensic anthropologists, an applied subfield in physical anthropology that stresses osteology. Only one followed Hulse's own academic leanings. In fact, at the time of his death, Hulse was second in the country to William M. Bass in actually producing forensic anthropologists,¹⁰ and influenced others in that direction. Why this was is not clear. Although, when feasible, he would attend meetings of the American Academy of Forensic Sciences after its physical anthropology section was established in 1972 and he helped frame the bylaws and qualifications of the American Board of Forensic Anthropology (a professional certifying body) some five years later, he belonged to neither. It may have been a combination of his informal but infectious interest in forensic anthropology, Arizona having a very large human skeletal collection, and the prior baccalaureate or master's level tutelage of some of his doctoral students.

Hulse was warmly regarded by his graduate students. They called him "Pappy," particularly the later ones, and enjoyed his hospitality at Friday afternoon seminars at his Ridge Road home in Tucson, complete with front yard desert fauna,

backyard swimming pool, wicked El Presidente cocktails, and exotic foodstuff. He could be frugal: for a new Ph.D. celebration party he gave a student ten dollars with orders to buy one bottle of scotch and bring back the change. He was modest: at the 1977 gathering of the American Association of Physical Anthropologists in Seattle, where he was feted with a day-long symposium in his honor, he stayed in the hall outside the meeting room while his accomplishments were being extolled by the lead-off speaker. And he was demanding of but confident in his students, expecting them to carry out lecturing and editorial tasks during his sabbatical absences.

A few years after his retirement Hulse and his wife finally accepted what he considered an outlandish sum for their Tucson home from a real estate developer and prepared to move into a new home they had purchased on Crest Road in Pebble Beach, California, adjacent to the famous 17-Mile Drive between Monterey and Carmel.

As they made their departure from Tucson in March 1982 with Leonie driving, some 100 miles west of Tucson, not far from Gila Bend, their vehicle left Interstate 8 and rolled over twice. Leonie died at the scene of the accident and Hulse was hospitalized for a time. He had to take up residence at Pebble Beach without the wife who, as one of his students wrote, had been “wonderfully warm, supportive, and understanding; an exceptional companion, [providing him] with artistic, clerical, and secretarial support for virtually his entire career.”¹¹ Hulse continued his research and writing, but although emphysema progressively slowed him down, he attended the San Diego meeting of the American Association of Physical Anthropologists in 1989, a year before he died of cancer.

ACHIEVEMENTS AND RECOGNITION

Hulse's emergence as an intellectual leader in anthropological genetics in the postwar period was not entirely unforeshadowed by his prewar training and research. He was, he believed, the first anthropology doctoral student that Hooton insisted take courses in genetics, and his examinations of Japanese in Hawaii, California, and Japan inculcated in him the integrated role of culture and biology in the study of human evolution. His first foray into population genetic research, however, was with Native Americans in the Northwest. His felicitous term, ripples on a gene pool, reflected his demonstration during his years at the University of Washington of the various cultural influences that had altered, and continue to alter, the genetic composition of Native American groups. His elegant study of the people of the Swiss canton of Ticino, in which he compared offsprings' stature in outgroup (between villages) and ingroup (within village) marriages both in the canton and among the Ticinesi who migrated to California (based on their village origin back in Switzerland), demonstrated a genetic effect independent from changes due to environment and nutrition. In later years he sought and found similar culture-mediated explanations for genetic-based variations, such as in skin color and sexual dimorphism, between related populations in Japan, England, and elsewhere.

Hulse's importance as a scholar and teacher went beyond his innovative research to incorporate the authority and elegance with which he expressed his ideas and conclusions. His compassion for his fellow humans and his ability to convey it in scientific papers that used hard words ("ethnic, caste, and genetic miscegenation") and in his popular undergraduate textbook, *The Human Species*, joined as it was with the clarity and sensibleness of his explanations of hu-

man physical differences, led to an influence wider than the anthropological community and more extensive than the number of his publications might suggest.

Throughout his later career the focus of Hulse's professional activities was the American Association of Physical Anthropologists (AAPA), an organization that was founded in 1930 and continues to be the largest of its kind. Hulse was chosen to be the managing editor of its flagship publication, *American Journal of Physical Anthropology*, for a six-year term (1964-69). During his editorship the journal increased in size by more than 50%. Hulse was also, while he was editor of that journal, elected to a two-year term as president of the AAPA (1967-69). The AAPA's 1977 annual meeting was dedicated to him for his many contributions and, in addition to the full-day symposium arranged by his students in his honor, he was the guest speaker at the annual luncheon, inquiring "A rose by any other name smells as sweet, or does it?"

In 1968, as a vice-president, he was the highest-ranking American official of the Eighth International Congress of Anthropological and Ethnological Sciences, held in Tokyo and Kyoto, an honor bestowed no doubt in part because of his long-term interest in Japanese anthropology. He made clear, however, that among all the recognitions of his achievements he felt most honored by his election to the National Academy of Sciences in 1974.

In December 1988, ten years after he became professor emeritus, the University of Arizona provided a capstone to Hulse's distinguished career. It conferred on him the degree of doctor of laws, *honoris causa*. The citation read, in part, "Son of Harvard and adopted son of The University of Arizona, for 20 years you devoted your energies to the Department of Anthropology in this institution. In so doing, you contributed in major fashion to its national and inter-

national reputation.” True enough, but only one of many legacies of this humane and farsighted scholar.

THIS MEMOIR IS BASED ON information in Hulse’s autobiographical statement in the archives of the National Academy of Sciences, materials contained in the archives of Harvard University’s Peabody Museum, an interview I had at Hulse’s Pebble Beach home in August 1986, my own reading of his research, and the generous assistance of his son Chris and many others, including K. A. Bennett, W. H. Birkby, H. K. Bleibtreu, T. Burke, S. M. Garn, R. Heglar, K. A. R. Kennedy, C. F. Merbs, F. P. Saul, D. R. Swindler, R. H. Thompson, C. G. Turner II, and C. W. Wienker.

NOTES

1. I ignore a four-page preliminary report in the *Soc. Georgia Archaeol. Proc.* for 1939.
2. F. S. Hulse autobiographical statement on file in the National Academy of Sciences archives, Washington, D.C., 1989.
3. R. M. Yerkes. *Almost Human*. New York: Century, 1925.
4. F. S. Hulse, Migration et sélection de groupe: le cas de Cuba. *Bull. Mém. Soc. Anthropol. Paris*, 13th series, 6(1979):137-46.
5. H. L. Shapiro. *Migration and Environment*. New York: Oxford University Press, 1939.
6. P. J. Knobloch. Isabel Truesdell Kelly (1906-1983). In *Women Anthropologists*, eds. U. Gacs, A. Khan, J. McIntyre, and R. Weinberg, p. 176. Urbana: University of Illinois Press, 1989.
7. G. R. Willey. *Portraits in American Archaeology*, p. 45. Albuquerque: University of New Mexico Press, 1988.
8. For a full bibliography see H. K. Bleibtreu and C. Hulse. Obituary: Frederick S. Hulse, 1906-1990. *Am. J. Phys. Anthropol.* 24(1992):118-20.
9. D. W. Plath. Personal communication, 1995.
10. S. Rhine. The genesis of practicing forensic anthropologists. *Connective Tissue* 8(4):6-9.
11. C. W. Wienker. In memoriam—Frederick Seymour Hulse. *Coll. Antropol.* 14(1990):165-68.

SELECTED BIBLIOGRAPHY

1941

The people who lived at Irene: physical anthropology. In *Irene Mound Site, Chatham County, Georgia*, J. Caldwell and C. McCann, pp. 57-68. Athens, Georgia: University of Georgia Press.

1943

Physical types among the Japanese. In *Studies in the anthropology of Oceania and Asia*, eds. C. S. Coon and J. M. Andrews IV. *Pap. Peabody Mus. Harv. Univ.* 20:122-34.

1947

Technological development and personal incentive in Japan. *Southwest. J. Anthropol.* 3:124-29.
Some effects of the war upon Japanese society. *Far E. Q.* 7:22-42.

1955

Blood-types and mating patterns among northwest coast Indians. *Southwest. J. Anthropol.* 11:93-104.
Technological advance and major racial stocks. *Hum. Biol.* 27:184-92.

1957

Linguistic barriers to gene-flow. The blood groups of the Yakima, Okanagon and Swinomish Indians. *Am. J. Phys. Anthropol.* 15:235-46.
Some factors influencing the relative proportions of human racial stocks. *Cold Spring Harbor Symp. Quant. Biol.* 22:33-45.

1958

Exogamie et hétérosis. *Arch. Suisses Anthropol. gén.* 22:103-25. English translation *Yearb. Phys. Anthropol.* 9(1964):240-57.

1960

Adaptation, selection, and plasticity in ongoing human evolution. *Hum. Biol.* 32:63-79.
Ripples on a gene-pool: the shifting frequencies of blood-type al-

leles among the Indians of the Hupa reservation. *Am. J. Phys. Anthropol.* 18:141-52.

1961

Warfare, demography, and genetics. *Eugen. Q.* 8:185-97.

1962

Race as an evolutionary episode. *Am. Anthropol.* 64:929-45.

1963

The Human Species. An Introduction to Physical Anthropology. New York: Random House. Rev. ed., 1971.

1964

The paragon of animals. *Eugen. Q.* 11:1-10.

1967

Selection for skin color among the Japanese. *Am. J. Phys. Anthropol.* 27:143-55.

1969

Ethnic, caste and genetic miscegenation. *J. Biosocial Sci.* 1(suppl.):31-41.

Scientific ethics and physical anthropology. *Am. J. Phys. Anthropol.* 31:245-48.

1972

Has mankind a future? *Dyn, J. Durham Univ. Anthropol. Soc.* 2:45-53.

1973

Natural selection and differential population growth of human races. *Soc. Biol.* 19:171-79.

1978

Group selection and sexual selection in human evolution. In *Evolutionary Models and Studies in Human Diversity*, eds. R. J. Meier, C. M. Otten, and F. Abdel-Hameed, pp. 17-37. The Hague: Mouton.

1981

Habits, habitats, and heredity: a brief history of studies in human

plasticity. *Am. J. Phys. Anthropol.* 56:495-501.

1982

Variability and variations in skin color among the English. In *Anthropological studies in Great Britain and Ireland*, ed. M. Firestone. *Anthropol. Res. Pap. Ariz. State Univ.* 27:4-18.

With K. A. Bennett. Shifting patterns of sex dimorphism in three Japanese populations. *Ann. Hum. Biol.* 9:441-52.

1983

The adaptive significance of pigmentary variability: a general review. *Indian J. Phys. Anthropol. Hum. Genet.* 9:1-20.