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# STANLEY MARION GARN 1922-2007

A Biographical Memoir by C. LORING BRACE

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Biographical Memoir

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# STANLEY MARION GARN

October 27, 1922–August 31, 2007

BY C. LORING BRACE

Stanley MARION GARN WAS ONE of the most important figures in the field of biological anthropology in the second half of the 20th century. He is well known for his longitudinal studies of biomedical problems, as well as the relationship between nutrition and osteoporosis. He also completed key studies on family histories, hair, nutrition, odontogenesis, and obesity.

Born on October 27, 1922, in New London, Connecticut, Garn was the grandson of a rabbi. Garn grew up in Providence, Rhode Island, where his father was involved in house construction. Garn retained an interest in construction for the rest of his life and although he went on to become a university professor, he kept a tool shop in his basement until the time came for him to go into assisted living. He also retained an interest in landscape and gardening for the same span of time.

Garn became interested in science early in life by reading books from the Rochambeau branch of the Providence Public Library, only three blocks from his house. He received books on home science and even some chemistry sets from his cousins. Collecting forays involved a trip with his parents to Diamond Hill, Rhode Island, so that he could gather minerals; to the Great Swamp to hunt for pitcher plants; and to the Eastern Scientific Company, where he bargained for leftover reagents, scratched test tubes, and chipped beakers.

At Providence Classical High School he had excellent science teachers who gave him problems to solve and questions to answer that went beyond the class requirements. Two of his violin teachers even contributed to his scientific education; one introduced him to carboniferous fossils and another to the rudiments of photography, which was to play a role in his career with newspapers and the Polaroid Corporation.

Garn acquired a broad but eclectic knowledge of the history of science in high school, saying, "I was very weak in theoretical and quantitative aspects, but strong in taxonomy and *materia medica*."

Garn entered Harvard in 1939 and found the wealth of opportunities positively overwhelming, noting that "it was Anthropology and specifically Physical Anthropology that captured my attention for it dealt with people and human biological variability and evolutionary practice and primates. Moreover, Anthropology introduced me to exotic places, a most tantalizing introduction for a lad from Providence, Rhode Island who had only once gone as far as New York City."

From his freshman year on, Garn was active as a parttime college reporter for various Boston newspapers. The pay was 25 cents per typeset inch, but on *The Daily Record* the headlines were counted, too. Being a correspondent with regular deadlines, he could not afford writer's block, and Garn was lucky, because he claimed he never suffered from that affliction. After three years at Harvard, Garn earned his degree, writing a thesis cum laude on dental variability.

In the fall of 1942 he entered Harvard Law School because he thought anthropology was unlikely to let him earn a living, but three months later he was a research associate in chemical engineering at the Massachusetts Institute of Technology, working as a photographer and photomicrographer. He took delight taking photos of asbestos fibers between crossed Nichol prisms.

Fortuitously, however, physical anthropology reentered the picture because the Chemical Warfare-MIT lab became heavily involved in gas-mask design and there were problems with fitting them. Therefore, Garn enrolled in the graduate school at Harvard, finally convinced that physical anthropology was practical and that one could even make a living at it. Taking one reading course with Earnest Albert Hooton each semester, he continued to live in Divinity Hall right near the Peabody Museum and its library. In 1944 he went to Polaroid as a technical editor, and his day-to-day work brought him close to Edwin H. Land.

As World War II ended and the guided-missile project at Polaroid came to an end, Garn was faced with three choices. The first choice was to stay with Polaroid, transferring to the new camera division; the second choice was to become a scientific writer elsewhere; and the third was to return to graduate work full-time with the goal of getting a Ph.D. He was even described as a "famous anthropologist" at that time in some of the Polaroid advertising copy; because he borrowed part of the Polaroid 77 design from Eskimo "sunglasses" in Harvard's Peabody Museum.

Upon returning to graduate school, Garn was given the opportunity to participate in the first Summer Seminar in Physical Anthropology at the Wenner-Gren Foundation in New York. This was exciting to Garn because all the big names were there, and human genetics and population biology were strongly represented. By the time of the 1950 Cold Spring Harbor Symposium, he and others had a better idea of what population genetics was all about.

In the summer of 1946 in New York Garn had a chance to test successive modifications of the new nosepiece he was designing for the Polaroid 77 sunglass because New York was full of diverse people with noses of different shapes. In the fall of 1946 Garn began a part-time appointment as a research fellow in cardiology at Massachusetts General Hospital, working with Paul Dudley White. To aid in White's study of coronary heart disease, Garn worked on anthropometric measurements and somatotyping, using Sheldon's method. Out of this work came dozens of papers and an awareness that cholesterol/phospholipid ratio was more telling than cholesterol alone, anticipating current attention to the highdensity lipoproteins (HDL). For this work Garn was paid \$1,000 a year; it was half-time work and low pay but residents and fellows at Massachusetts General Hospital told Garn how lucky he was to be working with Paul White. Through this work Garn also met Fuller Albright, Nathan Talbot, and Joe Aub, all three of whom helped him on later hair research.

In 1947 Garn began his second part-time job at the Forsyth Dental Infirmary in Boston. This was in line with his undergrad thesis, *Anomalies and Variability of the Dentition*, and he was expected to teach dental interns and study the growth of orthodontic patients; in fact, Garn says that what he learned at Forsyth led later to more than 100 publications. His first clinical paper (published in the *British Dental Journal*) was on the dentition in Morquio's syndrome. Garn also got to know M. M. Cohen, who became a collaborator and coauthor on many publications.

In the spring of 1948 Garn finished his Ph.D. on human hair and quickly prepared to join the Harvard-Peabody Aleutian Expedition organized by William S. Laughlin. Among Garn's discoveries was that all the hypercholesterolemics in Umnak, Alaska, were members of one extended lineage. In 1950 Garn married Priscilla Crozier, who survives him. In 1952 Garn was invited to the Fels Research Institute in Yellow Springs, Ohio, to interview for a position. He discovered that it came complete with a 23-year longitudinal database on various dimensions of human health, a solid departmental budget, and the opportunity to teach at Antioch College. At the end of two days in Yellow Springs, after the salary and perks had been described, Garn was asked for an immediate reply. He said yes and took the train back to Boston to tell the news to his wife, who merely asked, "When do we go?"

Before arriving in Yellow Springs, Garn was promoted to the rank of associate professor. One of his projects there involved the study of adult bone loss and the study of Xenia, Ohio, senior citizens. One of Garn's approaches to determining bone quality (percent cortical area or the amount of cortical bone in the cross-section) has since been named the Garn Index.

At Yellow Springs, Ohio, Garn supervised the Department of Growth and Genetics at the Fels Research Institute, but he also taught anthropology at Antioch College there. One of Garn's students was the late Stephen Jay Gould (1941-2002), long time professor of paleontology at Harvard University and a monthly columnist for Natural History magazine for over a quarter of a century. Some of the anti-evolutionary ethos that Gould represented in dealing with the human fossil record may have been derived from Hooton's outlook at Harvard as transmitted in the Antioch classroom by Stanley Garn. The other thing that survived for a long time after his indoctrination into it at Harvard was his commitment to the biological reality of human "races." The Coon, Garn, and Birdsell book (1950) is an early manifestation of this outlook and it lasted for a good two decades, continuing even after Garn had moved to Michigan, where biological anthropologists in the Department of Anthropology had pioneered in the documentation of the nonexistence of human races.

In 1968 Garn was offered a newly created position at the University of Michigan, as a fellow of the Center for Human Growth and Development. Not long before coming to the University of Michigan he was elected president of the American Association of Physical Anthropologists. And eight years after he moved to Michigan, he was elected to the National Academy of Sciences—in 1976.

One of the things that the profession at large will remember about Stanley Garn is his legendary productivity. With nearly 850 publications to his name, he overshadowed just about everyone else in biological anthropology. He did not type those contributions himself. At his retirement dinner on the University of Michigan campus in November of 1992, the long-time director of the Center for Human Growth and Development, Robert E. Moyers (1919-1996), recalled Garn's technique of getting a publishable manuscript. Calling to his secretary, he would say, "Shirley, take a paper," after which he would dictate what was to be sent to the appropriate journal. Fortunately he had good laboratory and secretarial help wherever he was located. "Greetings!" he would say to start the workday, and with his perpetually cheerful and upbeat manner, his crew always got a great deal of positive work done. During his career at Michigan, he was a regular member of doctoral thesis committees. He also coordinated the background that generated the data on human nutrition and growth that a stream of graduate students used for doctoral dissertation projects.

For most of his career Garn's focus was on the nature of human biological variation. His doctoral dissertation had been on human hair, its cross-section, texture, and variation, and for much of the rest of his life he dealt with many aspects of human growth and development, both normal and abnormal. He is well known for his Garn Index, the loss of bone density during the aging process, and numerous longitudinal studies of biomedical problems.

SOME OF THE INFORMATION in this memoir was provided by Barbara Garn, daughter of Stanley and Priscilla Garn. Barbara and her brother William David Garn live in San Luis Obispo, California, and I thank them both for the help and information they have given me.

# CHRONOLOGY

| Born on October 27 in New London, Connecticut               |
|---|
| B.A. degree in anthropology, Harvard University             |
| Research Associate in Chemical Engineering, Chemical        |
| Warfare Service Development Laboratory, Massachusetts       |
| Institute of Technology                                     |
| Technical Editor, Polaroid Corporation                      |
| Consultant in Applied Anthropology, Polaroid                |
| Corporation   |
| Research Fellow in Cardiology, Massachusetts General        |
| Hospital  |
| M.A. in anthropology from Harvard University                |
| Anthropologist, Forsyth Dental Infirmary, Boston            |
| Aleutian Islands field research                             |
| Ph.D. in anthropology, Harvard University                   |
| Instructor in anthropology, Harvard University              |
| Director, Forsyth Face Size Project, Army Chemical          |
| Corps   |
| Associate Professor and Professor of Anthropology,          |
| Antioch College   |
| Chairman of the Department of Growth and Genetics,          |
| Fels Research Institute                                     |
| Fellow of the Center for Human Growth and Development,      |
| University of Michigan;                                     |
| Professor of Nutrition, School of Public Health, University |
| of Michigan, Ann Arbor                                      |
| Professor of Anthropology, University of Michigan           |
| Emeritus  |
| Died August 31 in Ann Arbor, Michigan                       |
|   |

# BIOGRAPHICAL MEMOIRS

# AWARDS AND HONORS

- 1976 Elected to the National Academy of Sciences
- 1981 Neuhauser Lecturer, Society for Pediatric Radiology
- 1988 Raymond Pearl Lecturer, Human Biology Council
- 1987 Harvey White Lecturer, Children's Memorial Hospital
- 1994 Charles R. Darwin Lifetime Achievement Award, American Association of Physical Anthropologists
- 2002 Franz Boas Award, Human Biology Council

# OTHER POSITIONS

- 1958 Visiting Professor, University of Chicago
- 1962 Visiting staff member, Institute of Nutrition for Central America and Panama
- 1976 Visiting Professor, Southern Methodist University
- 1986 Walker-Anes Visiting Professor, University of Washington

# MEMBERSHIPS

American Society of Naturalists

American Anthropological Association (Fellow)

American Association of Physical Anthropologists, President, 1966-1967

American Academy of Arts and Sciences (Fellow)

American Academy of Pediatrics (Fellow)

American Society of Clinical Nutritionists (Fellow)

International Association for Dental Research

American Institute of Nutrition (Fellow)

International Organization for the Study of Human Development

Human Biology Association

International Association of Human Biologists

American Society for Nutritional Science (Fellow)

National Academy of Sciences

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# 1951

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- With M. M. Gertler, S. A. Levine, and P. D. White. Body weight versus weight standards in coronary artery disease and in a healthy group. *Ann. Int. Med.* 34:1416-1420.

# 1955

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# 1957

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#### 1960

Ed. Readings on Race. Springfield, Ill.: C. C. Thomas.

#### 1961

Human Races. Springfield, Ill.: C. C. Thomas.

#### 1964

Ed. *Culture and the Direction of Human Evolution*. Detroit: Wayne State University Press.

#### 1965

With A. B. Lewis and R. S. Kerewsky. X-linked inheritance of tooth size. J. Dent. Res. 44(2):439-441.

#### 1967

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# 1970

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- The Earlier Gain and Later Loss of Cortical Bone. Springfield, Ill.: C. C. Thomas.

# 1971

Human Races. 3rd ed. Springfield, Ill.: C. C. Thomas.

# 1972

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# 1973

With S. T. Sandusky, J. M. Nagy, and F. L. Trowbridge. Negro-white differences in permanent tooth emergence at a constant income level. *Arch. Oral Biol.* 18(5):609-615.

#### 1974

With D. C. Clark and K. E. Guire. Level of fatness and size attainment. Am. J. Phys. Anthropol. 40(3):447-449.

#### 1979

The noneconomic nature of eating people. *Am. Anthropol.* 81(4):902-903.

#### 1980

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#### 1983

With A. S. Ryan. Relationship between fatness and hemoglobin levels in the National Health and Nutrition Examination of the U. S. A. *Ecol. Food Nutr.* 12(4):211-215.

#### 1985

Continuities and changes in fatness from infancy through adulthood. *Curr. Prob. Pediatr.* 15(2):1-47.

# 1986

With K. R. Rosenberg. Definitive quantification of the smoking effect on birthweight. *Ecol. Food Nutr.* 19:61-65.

# 1988

With T. V. Sullivan and V. M. Hawthorne. Age changes in hard and soft tissues and lipids. N. Y. Med. Q. 8(2):40-46.

#### 1990

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