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PERCIVAL BAILEY

1892—1973

A Biographical Memoir by

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Biographical Memoir

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PERCIVAL BAILEY

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BY PAUL C. BUCY

THE BARREN CLAY HILLS of southern Illinois did not produce good corn or hogs, but they produced superb men. This southernmost section of Illinois is formed by the Ohio River on the southeast, by the Mississippi River on the southwest, and by an indefinite, irregular line running from a few miles north of St. Louis, Missouri, east to the Wabash River. This triangle has long been known as "Little Egypt" and appropriately has Cairo, located at the apex of the triangle and the junction of the Ohio and Mississippi rivers, as its capital.

The unproductiveness of Little Egypt led to poverty. It seems very likely that this poverty was the force that drove many intelligent young people to head North (generally to Chicago) to become distinguished judges, lawyers, scientists, and doctors. The direction of this migration was determined in considerable measure by the existence of the Illinois Central Railroad, which ran from Little Egypt directly to Chicago.

In other parts of the United States, notably in New England, similar developments have been attributed to parents' erudition and the excellence of educational opportunities. Certainly this explanation does not apply to Little Egypt. The fathers of these young men, for the most part, eked out a bare existence from the poor soil or otherwise worked daily

with their hands and were often drunk. Their hard-working mothers had little time for anything but bearing children and caring for their large families.

The people of Little Egypt had migrated into southern Illinois—by way of Kentucky—from Virginia, the Carolinas, and Tennessee. Percival Bailey's forebears only partly fit the pattern. His great-grandfather, Gebhard Boehler, emigrated as a young man from Hinterstadl in Baden, Germany. He was a journeyman miller. Marrying upon his arrival in Illinois, Boehler (later changed to Bailey) added a German strain to the English, Scots, and Irish stock common to southern Illinois.

Percival Bailey's father, John Henry Bailey, never attracted his son's admiration or affection. A laborer seldom steadily employed, he drank to excess and was irresponsible. Installing his family in a one-room log hut, he took off for Cuba and the Spanish-American War.

Bailey's mother—a kindly, uneducated, hard-working woman—devoted her life to the rearing of her family. Born Mattie Orr, she married John Henry Bailey when she was seventeen years old. Percival Sylvester, her first child, was born on her eighteenth birthday, May 9, 1892. Percival had great affection for his mother, and her death in 1912, when he was nineteen years old, was a hard blow.

Dr. Bailey was never happy with either of his given names. During his early years he went by the nickname "Ves." In later life he dropped the name Sylvester and the nickname Ves altogether and preferred to be called Percy.

In 1906, when he was fourteen years old, Bailey left home after a violent quarrel with his father and went to live with his uncle, Gaphart Bailey, a farmer. His early schooling took place in a one-room country schoolhouse and was something of a "hit and miss" proposition. The school year was short, confined largely to the winter months, because children were

needed to help with planting in the spring, tilling in the summer, and harvesting in the fall.

Yet many apparently unrelated developments worked to shape Bailey for the future. Hard work on his uncle's farm turned the spindly boy into a sturdy, vigorous man. It also convinced Bailey that he would not earn his livelihood with his hands. At this same time he met a remarkable character, Dr. Arsen Artin Sissakian, a country doctor he describes in a paper entitled, "Ol' Doc Artin." This philosophical Armenian and another general practitioner, Dr. George W. Barrows, who cared for Bailey's mother in her final illness, did much to turn Percy's interest toward medicine.

After completing the local country school, Bailey won a scholarship to the nearby normal school, Southern Illinois State Teachers College, now Southern Illinois University, in Carbondale. He proposed to become a country school-teacher, a goal that was never achieved, but his experience at Carbondale was the beginning of a long series of varied influences that were to mold his future.

Throughout his life various women appeared at the appropriate time to help and guide him. First it was his mother, then Martha Buck, an Englishwoman who taught grammar and etymology at Southern Illinois. Later Ethel Terry would help him to obtain a scholarship to The University of Chicago, while Sisters Leonardo and Ethelrita at the Mercy Hospital in Chicago would protect him and teach him much about life among charity patients. Most important of all was Yevnigé Bashian, the beautiful Armenian girl that he would marry.

Martha Buck was the first person to create in Bailey the realization that he was capable of being something more than a country teacher. She stimulated and fed his ambition, and, together with another teacher, Carlos Eben Allen, guided his footsteps to The University of Chicago, which he entered on

graduating from Southern Illinois Normal University in 1912. He went on to obtain a B.S. in 1914 and a Ph.D. in 1918 from The University of Chicago and an M.D. degree from Northwestern University, also in 1918.

At The University of Chicago Bailey's future began to unfold. He found himself in an academic world of which he had been totally ignorant. At The University, he came under the influence of such giants as Harvey Carr, professor of experimental psychology, who fostered in him an inquiring mind and taught him to ask, "What is wrong with this argument?" George W. Bartelmez taught him scientific method. C. Judson Herrick opened the world of neurology to him. Anton ("Ajax") J. Carlson taught him to ask, as Bailey expressed it, "Vat iss dee effidence?" Julius Grinker, not on the faculty, stimulated his interest in clinical neurology. Later, others, including Harvey Cushing, Pierre Marie, George Boris Hassin, Pierre Janet, and Gaetan Gatian de Clérambault, were also to be important in his development and training. But it was his mentors at The University of Chicago who molded Bailey into the scientist and clinician, anatomist, neurophysiologist, neuropathologist, clinical neurologist, neurological surgeon, and psychiatrist that he was to be. He became the outstanding catholic neurologist, recognized throughout the world as "Mister Neurology," a man without peer.

Bailey's Ph.D. thesis dealt with the anatomy of the brain, and he later earned money to complete his medical education teaching anatomy at Northwestern University, in Evanston. He obtained his preclinical medical education at The University of Chicago and his clinical education at Rush Medical College and at Northwestern University Medical School. During these last two clinical years, his studying was done largely on the Chicago elevated trains running between Evanston, on the north, Rush Medical College, on the west, and Northwestern University Medical School, on South Dearborn Street.

The faculties of Rush Medical College and Northwestern Medical School made little impression upon Bailey, and he never mentioned them in later years. But he often spoke with great admiration and affection of Julius Grinker, of the Post-graduate Hospital in Chicago, from whom he first learned clinical neurology. Grinker was a very able neurologist, who wrote the section on neurology in Tice's *Practice of Medicine*, a popular encyclopedic work of that time. Caustic and hypercritical, he was anything but diplomatic in his dealings with others. Yet Grinker recognized in Bailey an intelligent, inquiring young man whom he delighted to teach. Bailey in turn liked Julius Grinker and loved to learn.

After he graduated from Northwestern University in June 1918, he began his internship at the Mercy Hospital in Chicago, completed nine months later. His impressions of Mercy Hospital and its staff were for the most part unfavorable, except for two nuns Sister Leonardo and Sister Ethelrita, for whom he retained great affection and admiration. (Bailey related his experiences at the Mercy Hospital in a delightful chapter, "Sister Ethelrita," in *Up From Little Egypt*.)¹

As he was approaching the end of his internship, Bailey wrote two letters, one to the surgeon Harvey Cushing, in Boston, and one to the psychiatrist Adolf Meyer, at Johns Hopkins. This has led to speculation that Bailey was a man who had difficulty making up his mind and could not decide whether he wanted to be a neurosurgeon or a psychiatrist. Anyone who knew Bailey well would reject this interpretation, for—even at this early date—his interest was in the nervous system rather than in any one of its disciplines. He wished to study the neurosciences and at the same time to be a clinician. He cared little whether his clinical activities were as a neurologist, a surgeon, or a psychiatrist, as was true for

¹ Percival Bailey, *Up From Little Egypt* (Chicago: The Buckskin Press, 1969) 265 pp.

the rest of his life. Cushing replied immediately, Meyer, in three months. Both accepted Bailey for training in their institutions, but Bailey had already accepted Cushing's offer and was at work in Boston when he received Meyer's letter.

Off and on, from April 1919 until July 1928, Bailey worked with Harvey Cushing at the Peter Bent Brigham Hospital in Boston. These were trying years. Bailey admired Cushing's ability as a surgeon and as a teacher of neurosurgeons. He recognized Cushing's unequalled contribution in salvaging brain surgery from a premature death, in developing that specialty, and in showing how surgical lesions of the nervous system could be diagnosed and successfully treated. Yet he had nothing but contempt for Cushing as a man. In *Up From Little Egypt* (p. 209), Bailey wrote of Cushing:

(1) he was very artistic and had a tendency to prettify his data, (2) he had a tart tongue, (3) he had a tendency to believe anything which he imagined was true and was not too careful about the conclusiveness of his proof, (4) he had never learned to spell or write English correctly, (5) his scholarship left much to be desired.

Yet it was during his years with Cushing that Bailey became a neurosurgeon and made what was probably his greatest single contribution to neurology—his book *Tumors of the Glioma Group*, which he published with Cushing (Philadelphia: J. B. Lippincott Co., 1925, 175 pp., 108 illus.). It represents many years of hard work in which Bailey applied his knowledge of neuroanatomy and neuropathology to the definition of the microscopic nature of gliomas, their relation to the normal glial cells of the developing and adult nervous system, the clinical correlation of these tumors, and the prediction of their prognosis based on their microscopic appearance. This book completely revolutionized the understanding and diagnosis of these tumors and still influences

neurological and neurosurgical thought. Its excellence and thoroughness are attested by the fact that the classification of gliomas that it proposed has changed but little over the ensuing fifty years.

Nine months after arriving in Boston, Bailey—unhappy with Cushing's behavior—returned to Chicago to work with George Boris Hassin in neuropathology at the Cook County Hospital. Hassin was one of the pioneers in neuropathology and was largely self-educated. He, too, was a difficult person, but one whose keen sense of integrity Bailey admired. In October 1920, Bailey returned to Cushing and Boston, only to leave the following year for Paris. This year in France was undoubtedly one of the happiest in Bailey's life. He always recalled it with great pleasure and frequently regaled his listeners with lively tales of his life there. At La Salpêtrière, he came under the influence of Pierre Marie, one of the greatest clinical neurologists of this century. Bailey also learned to speak French perfectly, without a trace of foreign accent, my French friends inform me.

In 1922 Bailey returned from Paris to Boston and resumed his work with Cushing for the longest continuous period he was to spend with him. While he was still a student at The University of Chicago, Bailey had developed a friendship with an Armenian theological student, Antranig Bedikian, who married Marie Bashian. At their wedding Bailey met Marie's sister, Yevnigé, who soon entrapped his heart. Cushing learned of their plans to marry.

This was in those days of long ago when medical students, interns, residents, and even young associates did not marry. Cushing feared that marriage would so divert Bailey's interests and efforts from the laboratory as to be catastrophic for his research. Learning that Yevnigé Bashian's father was dead and her two uncles, Armenian rug merchants in New York City, were the influential members of the family, he went to

New York to call on the uncles. They assumed that this distinguished surgeon from Boston had come to buy rugs. Coffee was served, and after suitable courtesies were exchanged, they got down to business. Cushing told them of the outstanding young man whose career was about to be ruined by his marriage to their niece. He could not have chosen a more disastrous means of achieving his goal. Instead of convincing the uncles to prevent the marriage, Cushing had, by his effusive description of Bailey's outstanding intelligence and great future, convinced them that here was the ideal husband for Yevnigé. He returned to Boston empty-handed—no rugs, no agreement.

Bailey's marriage further strengthened his contacts with and interests in things Armenian, begun early in life with his admiration for the southern Illinois doctor, Arsen Sissakian. Yevnigé's brother, Antranig, was to become one of his closest friends.

In 1925 the book on gliomas came off the press and Bailey had already begun work on another monograph, *Blood Vessel Tumors of the Brain*. This clinicopathological study was far ahead of its time and, as a result, never attracted great attention. In 1928 surgical techniques for treating vascular malformations were still many years away.

In 1925 Bailey returned to Paris, again following up his interest in psychiatry. On his first trip, Bailey had become acquainted with Pierre Janet, who worked at La Salpêtrière. On this second trip he worked at L'Hospice de la Ste. Anne with Gaetan Gatian de Clérambault. Janet had been influential in the development of the career of Sigmund Freud when Freud worked in Paris, but had later taken great exception to Freud's ideas, based more and more on what patients told him. Janet, wrote Bailey (*Up From Little Egypt*, p. 213), "distrusted memory and had no use for accounts of the sayings of patients unless recorded at the time." De Cléram-

bault, on the other hand, was a firm believer in the organic nature of psychiatric disorders: "These phenomena Clérambault believed to be due to intracellular changes in the neurones of the cerebral cortex." (p. 214)

Bailey had given evidence of his interest in psychiatry when he wrote Adolf Meyer requesting an opportunity to study under him. His work with Clérambault was a second manifestation of this interest, but it was not until many years later—when he accepted an appointment as director of the Illinois State Psychopathic Institute in 1951—that this interest was to come to the fore.

In 1928 Bailey was selected by Dallas B. Phemister, professor of surgery at The University of Chicago, to develop neurological surgery at that institution. Bailey was thrilled with this opportunity. His earlier experiences at The University, when he had associated with such outstanding neuroscientists as Charles Judson Herrick, George W. Bartelmez, and Anton J. Carlson, had demonstrated that institution's dedication to neurology.

Franklin C. McLean, who had close affiliations with the Rockefeller Institute, had been recruited by The University to organize this new medical school. McLean envisioned a new type of medical school in which clinical fields would have a close relationship, not only to basic medical sciences, but also to biological and physical sciences represented elsewhere in The University. Under such a system, both clinical and preclinical departments would engage in research. It was also McLean's plan that all members of the medical faculty be employed full time, supported entirely by salary. Phemister entertained similar views and had recruited—in addition to Bailey—Lester R. Dragstedt, head of the Department of Physiology at Northwestern University, and George Curtis, head of the Department of Anatomy at the University of Louisville, as professors of surgery.

Knowing this, Bailey was encouraged to hope that he would be able to develop an integrated department of neurosciences at Chicago and not just a division of neurological surgery. He might have had misgivings about his ability to handle the clinical side of his new position, for much of his time in Boston had been spent in the laboratory and his years in France had not trained him to perform neurosurgical operations. Ever helpful, Cushing, on learning that Bailey was going to Chicago, remarked "I don't know what is going to become of you. You will never be a neurosurgeon," (*Up From Little Egypt*, p. 126). Even Max Peet, professor of neurological surgery at the University of Michigan and later Bailey's close friend and admirer, exclaimed to this author on learning of the appointment, "Why, Bailey is not a neurosurgeon; he's a pathologist!"

If Bailey was forced to rely on his own evaluation of his surgical abilities, in the end, he was proven correct. He became a superb neurosurgeon, though he lacked the enthusiasm for operating that characterizes most surgeons. Once he had demonstrated he could perform an operation well, he lost interest in repeating it and would turn successive operations of the same type over to me.

Bailey arrived at The University of Chicago in the summer of 1928 and immediately began organizing a department of neurosciences. As his neurosurgical assistant he recruited this author, Paul C. Bucy, then a young man. Trained in neuropathology by Samuel T. Orton, I had developed an interest in the pathology of brain tumors. He also brought in Roy R. Grinker, the son of Bailey's old teacher of neurology, Julius Grinker, as medical neurologist. Stephen Polyak was induced to come to Chicago from the University of California, where he had recently completed the research that resulted in his publication *Afferent Fiber Systems of the Cerebral Cortex* (Berkeley: University of California Press, 1932, 370 pp.). Bailey intended to recruit into his new department men

with backgrounds in both neurochemistry and in neurophysiology.

At first all went well at Chicago. Bailey, together with a number of colleagues in other departments of The University, formed a "neurology club." This group, very informal, with no dues, no bylaws and no officers, met monthly except during the summer. At each meeting one of the group presented the results of his own research, followed by a general discussion and free-swinging criticism. No notes were kept and there was no publication. In addition to Bailey, the neurology club included the famous physiologist Anton J. Carlson; physiologist Arno B. Luckhardt, discoverer of the anesthetic properties of ethylene and father of modern anesthesiology; Robert R. Bensley, head of the Department of Anatomy and expert on the islet cells of the pancreas; Charles Judson Herrick, world-renowned comparative neuroanatomist and neurological philosopher; George W. Bartelmez, embryologist, neuroanatomist, and experimental endocrinologist; Roy R. Grinker, neuropathologist, medical neurologist, and later psychiatrist and psychoanalyst; Carl R. Moore, endocrinologist and chairman of the Department of Zoology; Karl S. Lashley and Heinrich Klüver, two of the world's most distinguished experimental psychologists; Ralph S. Lillie, neurophysiologist; Nathaniel Kleitman, physiologist and authority on sleep; Paul Weiss, experimental neurologist later at The Rockefeller University; Ralph W. Gerard, electroneurophysiologist; Stephen Polyak, neuroanatomist and clinical neurologist; Frederick C. Koch, biochemist; Paul C. Bucy, neurosurgeon; and A. Earl Walker, in training in neurosurgery and studying the thalamocortical connections. It was a most stimulating group that established the scientific atmosphere for the development of the neurosciences, not only at The University, but in all of Chicago as well.

Yet when The University of Chicago was approached

about receiving a large gift to create a neurological institute with Bailey as director, with The University to raise an equal sum of money from other sources, it informed the prospective donor that it was not interested. This seemed clear evidence that The University was not interested in becoming an outstanding center for the neurosciences.

The Division of Neurology and Neurological Surgery, of which Bailey was head, was a hydra-headed monster. Bailey himself operated under heads of three separate departments: Dallas B. Phemister, surgery; George F. Dick, medicine; and Frederick Schlutz, pediatrics. Bailey found that he could rarely get all three men to agree about anything. On one occasion they could not even agree to accept a young man Bailey had selected for training in neurology and neurosurgery. When Bailey finally approached the president of The University, Robert Maynard Hutchins, and the dean of the Division of Biological Sciences, William Taliaferro, he found neither interested in developing neuroscience at The University of Chicago. After years of trying, Bailey discontinued his efforts and resigned.

It is not to be assumed, however, that the years Bailey spent at The University of Chicago were not fruitful. During this period Bailey trained this author, who later became head of the Division of Neurological Surgery at Northwestern University Medical School. Another student, A. Earl Walker became head of the Division of Neurological Surgery at the Johns Hopkins Medical School, while William H. Sweet became professor and head of the Department of Neurological Surgery at Harvard University and the Massachusetts General Hospital. Bailey was also largely responsible for training Clovis Vincent and his associates in neurosurgical techniques. Vincent was already a distinguished neurologist and was recognized as the father of modern neurological surgery in France. Marcel David, a pupil of Vincent's and ultimately pro-

fessor of neurological surgery in Paris, and Pierre Puech of Paris also worked with Bailey. Among Bailey's other distinguished pupils were Chisato Araki of Kyoto and Kenji Tanaka and Kentara Shimizu of Tokyo, who were to return to Japan and foster neurosurgery there. Other pupils were Cobb Pilcher, professor of neurosurgery at Vanderbilt; Sidney Gross, head of the Department of Neurosurgery at Mt. Sinai Hospital in New York City; Adolfo Ley Gracia, professor of neurosurgery in Barcelona and the first neurosurgeon in Spain; Arist Stender, professor and head of the Department of Neurology and Neurological Surgery at the Free University in West Berlin; Jerzy Chorobski, professor and head of the Department of Neurosurgery in Warsaw; Wallace Hamby, professor of neurosurgery at the University of Buffalo and later head of neurological surgery at the Cleveland Clinic; Jess D. Hermann, head of neurosurgery at the University of Oklahoma; John E. A. O'Connell, head of neurosurgery at St. Bartholomew's Hospital, London; and Stephen Környey, professor and head of the Department of Neurology, Pecs, Hungary.

There were many others—from Italy, Belgium, Argentina, and elsewhere—who later had distinguished careers in general surgery and who benefitted from a period in Bailey's service. These included William E. Adams, professor and chairman of the Department of Surgery, The University of Chicago; Frederick E. Kredel, professor and chairman of the Department of Surgery, Medical University of South Carolina; and Henry Harkins, professor and head of the Department of Surgery, University of Washington, Seattle.

What of research by and under Bailey at Chicago? His first major publication after arriving at Chicago was a book already started while he was in Boston, *Blood Vessel Tumors of the Brain*. In 1933, he published his classic clinical text on brain tumors, *Intracranial Tumors*. His many scientific papers

from this era included: "Hemangiomas of the Cerebellum and Retina (Lindau's Disease)"; "Angioblastic Meningiomas"; "Intracranial Sarcomatous Tumors of Leptomeningeal Origin"; "Oligodendrogliomas of the Brain"; "The Oxytocic Substance of the Cerebrospinal Fluid"; "Cavernous Hemangioma of the Vertebrae"; "Contribution to the Study of Tumors in the Region of the Third Ventricle"; "Astroblastomas of the Brain"; "Origin and Nature of Meningeal Tumors"; "Spongioblastomas of the Brain"; and "A Sensory Cortical Representation of the Vagus Nerve." In addition, with Buchanan and Bucy, he published *Intracranial Tumors of Infancy and Childhood*.

At this time A. Earl Walker, under Bailey's supervision and the direction of Stephen Polyak, established the connections between the various nuclei of the thalamus and the different parts of the cerebral cortex, published in the true classic, *The Primate Thalamus* (Chicago: University of Chicago Press, 1938. 321 pp.). This author, also under Bailey, had demonstrated that abnormal involuntary movements, such as choreo-athetosis and tremor, could be abolished by specific destructive lesions in the brain. As a result of my work on neural control of the skeletal musculature, I began to formulate ideas that led to my demonstration that the so-called "pyramidal syndrome" does not develop as the result of destruction of the pyramidal tract and that the pyramidal tract can be destroyed in both man and monkey without causing paralysis. Theodore J. Case, working with equipment he built himself in Bailey's laboratories, was one of the first to demonstrate the changes in the electroencephalogram as the result of a tumor of the brain.

During the years from 1928 to 1939, while he was organizing neurology and neurological surgery at The University of Chicago, Bailey was actively teaching undergraduates and

establishing The University Clinics as an outstanding institution for the treatment of brain tumors and other neurological disorders.

After his resignation in 1939, Bailey accepted an appointment as professor of neurology and neurological surgery at the University of Illinois, in Chicago. Here he was relieved of all administrative duties and had his own neuropathological laboratories, both for his own use and for the use of the many graduate students who came to him. He also taught medical students and cared for such patients as interested him, continuing the practice he had started at The University of Chicago, where, during the last several years, he had entrusted most of the neurological surgery to this author's hands.

In 1937 Bailey's research interests were to take a somewhat different turn. He took a leave of absence from The University of Chicago for a year and a half, going first to Belgium for several months with his old friend from Boston days Frederic Bremer, one of the leading neurophysiologists of Europe. From there Bailey went to Yale to spend time with the noted Dutch neurophysiologist, J. G. Dusser de Barenne, for Bailey had long recognized that he could never achieve complete mastery of all phases of neurology unless he became involved in neurophysiology. At the University of Illinois he induced Eric Oldberg, head of the Department of Neurology and Neurological Surgery, to engage Warren S. McCulloch, a pupil of Dusser de Barenne's at Yale, to take charge of the experimental neurophysiological laboratories in the new Illinois Neuropsychiatric Institute. In this laboratory, Bailey, McCulloch, Hugh Garol, and Gerhardt von Bonin investigated the cortico-cortical connections in the brain and the functions of these in monkeys and apes. After a few years McCulloch left Illinois to go to the Massachusetts

Institute of Technology and was succeeded by Ralph Gerard, who became director of the neurophysiological laboratories for a short time.

Bailey had serious doubts about whether the minute parcellation of the cerebral cortex Cecile and Oskar Vogt and their pupils had described was either accurate or meaningful. Collaborating with Gerhardt von Bonin, professor of neuroanatomy at the University of Illinois, he concluded that only major cytoarchitectonic areas in the cerebral cortex could be documented. From these studies came two books, *The Neocortex of Macaca Mulatta* (1947) and *The Isocortex of Man* (1951). Bailey conducted some investigations on the physiology of the midbrain with Edward W. Davis, but probably the most significant of his studies at that time were made with Frederick A. Gibbs on temporal lobe epilepsy.

After the new Illinois Neuropsychiatric Institute was opened and Bailey's laboratory established, graduate students from all over the world came to work with him. Some of these, like John R. Green, director of the Barrow Neurological Institute in Phoenix, Arizona, took their residency training in neurological surgery at the University of Illinois. Others came to work with Bailey for only a few months, or a few years. Among these were Carl Graf, professor of neurosurgery at the University of Iowa; Carlos Oliveras de la Riva, professor of neurology, Barcelona, Spain; B. Griponissiotis, professor of neurosurgery, Thessaloniki, Greece; H. R. Oberhill, associate professor of surgery (neurosurgery), Northwestern University; Rudolf Petr, professor of neurosurgery, Hradec Králové, Czechoslovakia; Roman Arana Iniguez, director of the Neurological Institute, Montevideo, Uruguay; Joseph G. Chusid, associate clinical professor of neurology, Columbia University; F. E. Nulsen, professor and head of the Department of Neurological Surgery, Case Western Reserve University, Cleveland; John D.

French, director of the Brain Research Institute, University of California, Los Angeles; Oscar Sugar, professor and head of the Department of Neurological Surgery, University of Illinois, Chicago; José G. Albernaz, professor and head of the Department of Neurology and Neurological Surgery, University of Minas Gerais, Belo Horizonte, Brazil; Bernard Pertheuisset, professor of neurological surgery, Paris; Orlando Andy, professor and head of the Department of Neurosurgery, University of Mississippi.

Bailey was also the editor for ten years (1946–1956) of the neurosurgical section of *The Year Book of Neurology, Psychiatry and Neurosurgery*. He participated in the translation of his books *Intracranial Tumors* and *Tumors of the Glioma Group* into several different languages and in the publication of new editions of *Intracranial Tumors* and *Intracranial Tumors of Infancy and Childhood*. He became very interested in the possibility of stereotactic surgery in man but realized that such operations could not be performed satisfactorily without an accurate atlas of the human brain. Bailey recognized the practically insuperable difficulty of obtaining suitable fresh specimens of human brains in the United States. He secured the cooperation of an old friend from Boston days, Georg Schaltenbrand, who was professor of neurology at the University of Würzburg, in Germany. Schaltenbrand was able to obtain one hundred and eleven brains and have them properly fixed, sectioned in various planes, stained, and photographed. The result was *Introduction to Stereotaxis with an Atlas of the Human Brain*, published in three volumes (Stuttgart: G. Thieme, 1959). This atlas was promptly accepted because of its accuracy and the excellence of the photographs of the brain.

But Bailey's interest in neurology and neurological surgery was lagging, and he returned to a former interest—psychiatry. Bailey had long been interested in the relation-

ship of the brain to human mentation and human behavior and was convinced that many psychiatric problems resulted from organic disturbances in the structure and functioning of the brain. He was also convinced that psychiatry had been "led down the primrose path" by Sigmund Freud and that psychoanalysis was the principal stumbling block in the way of scientific progress in psychiatry. In *Sigmund the Unserene* (1965), he wrote:

My animus is not directed toward Freud. My animus is directed toward the overweening, hypertrophied and distorted influence which his movement has attained in these United States, as he foresaw and feared. In this way, it has, in my opinion, done great damage to psychiatry, as well as to our civilization in general. . . . (p. xiii)

There is no conclusive evidence that, as a method of therapy, psychoanalysis is more effective than others, and it is costly beyond its merits; as a philosophy it is chaotic, contradictory and circular; as a science it is unestablished; and as a religion it is inadequate. (p. 103)

When, in 1951, he was offered positions as director of the Illinois Neuropsychiatric Institute, research and educational consultant to the Illinois Department of Public Welfare, and director of the Illinois State Psychopathic Institute, Bailey saw the opportunity to do something for psychiatry. In these positions he had the onerous responsibility of visiting and reporting on the care of patients in various state psychiatric hospitals in Illinois. He was also the advisor to the governor of Illinois in psychiatric matters. He very shortly realized that no worthy psychiatric research existed in Illinois, that there was no psychiatric training in state institutions, that state institutions were very understaffed, and that what staff there was were poorly trained. He also noted that care of patients in the Illinois state psychiatric institutions was woefully inadequate. He also recognized that, even if better-trained personnel were available in sufficient numbers for these state

institutions, therapeutic knowledge in psychiatry was so terribly deficient that they would not be able to do much for these unfortunate patients. Adequate, effective therapy is dependent upon understanding the cause of disease and its pathology. This information was, and in large measure still is, sorely lacking.

Bailey learned that over \$8 million was lying unused in the treasury of the state of Illinois, money that had been paid over the years by patients' relatives for their care. Under the laws of the state this money could only be used to improve the care of patients in the state psychiatric institutions, yet surprisingly, up until this time, no one had had the imagination necessary to use it. Bailey was able to convince Governor Adlai Stevenson and the state legislature to use these funds to create and maintain an Illinois Psychiatric Training and Research Authority, which was modeled after the National Institute of Mental Health. Its purpose was to support psychiatric training and research within the state. Bailey was named executive director of this Authority. As long as Bailey was in good health and able to protect it from politicians eager to control it, it continued to function in an exemplary fashion.

At the same time that the Authority was created, Bailey convinced the governor and the legislature of Illinois to build the Illinois State Psychiatric Institute in Chicago. This institute of 500 beds was to be organized and staffed by the five medical schools in Chicago. It housed patients and facilities for research for the training of young psychiatrists, primarily for the staffs of the other state psychiatric institutions. Bailey was named director of research at the new institute (1958–1967). In 1964 he was also appointed director, Division of Research Services, Department of Mental Health, State of Illinois, a position he held until 1967. It would be toying with the facts not to report the failure of these efforts to improve

psychiatry and psychiatric patient care in the state of Illinois, a great disappointment to Bailey. He did not accomplish what he had envisioned, but he did do much to stimulate a re-evaluation of psychiatric concepts and what passed for psychiatric knowledge and to reorient psychiatry in the direction of science.

Bailey also “took off” after Freud, believing that Freud’s deification and the conversion of psychoanalysis into a religious creed—to be accepted on faith—was a roadblock to the proper understanding and effective treatment of psychiatric disorders. He explored Freud’s writings in the original German, reading and citing 318 articles—26 by Freud himself—in the Norman Wait Harris Lectures delivered at Northwestern University in April 1963 and in his book *Sigmund the Unserene: A Tragedy in Three Acts* (Springfield, Ill.: Charles C Thomas, 1965), later translated into French under the title *Sigmund le Tourmenté*.

Bailey says in his introduction to this book (p. xi), “Today no intelligent man can avoid coming to grips with his [Freud’s] powerful, more baneful than beneficial, influence.” It is not to be supposed that the pernicious influence of the Freudian doctrine was limited to the understanding and practice of psychiatry. As Alajouanine, professor of neurology at the University of Paris, says in the preface to *Sigmund le Tourmenté*, “Dans les sphères intellectuelles, beaucoup croient avoir trouvé dans les conceptions freudiennes une psychologie nouvelle qui va permettre de pénétrer dans les profondeurs de l’inconscient et, de là, pour certains, va s’édifier une philosophie de la vie et une interprétation du monde basée sur la métapsychologie de Freud. Dans le domaine littéraire, le roman, le théâtre, la critique et même l’histoire sont de plus en plus largement imprégnés de concepts tirés des doctrines freudiennes.”

Bailey’s psychiatric friends and teachers in Paris had been

impressed that Freud was little concerned with fact and quite prepared to accept as fact the fanciful, often imaginary, frequently inaccurate statements of his neurotic and psychologically disturbed patients. This was not only apparent to these men—many of whom had come to know Freud during his stay in Jean Martin Charcot's clinic (October 13, 1885, to February 28, 1886)—but was also known from Freud's own writings. Freud states in his autobiography (1952) in referring to "childhood scenes" that his patients related to him, "I believed these stories, and consequently, supposed that I had discovered the roots of the subsequent neurosis . . . when, however, I was at last obliged to recognize that these scenes of seduction had never taken place, and that they were only phantasies which my patients had made up, or which I myself had perhaps forced upon them." as quoted in *Sigmund the Unserene*, p. 19.

It is not to be supposed that Bailey's lectures or books about Freud abolished his "baneful influence" on psychiatry, literature, and thought, but it is fair to say that Bailey's efforts in the field of psychiatry were a major force in diverting psychiatric thinking back into scientific channels. Bailey was unhappy with what he had been able to do in psychiatry, just as he had been unhappy years before with the failure of his efforts to bring neuroanatomy, neurophysiology, neurochemistry, neuropathology, medical neurology, and neurological surgery together into one discipline in our universities. Bailey was ahead of his time.

Bailey was a scientist—a seeker after truth by the establishment of facts and intolerant of dishonesty. On one occasion I was in his office when he was reading a scientific article in which a distinguished neuroanatomist described intracellular inclusions he was attempting to correlate with certain functional activities. A puzzled look came over Bailey's face and he reached in his desk for a magnifying glass to examine

the photomicrograph carefully. Finally, he straightened up and said, "That photomicrograph has been retouched." Bailey promptly wrote to the author, whom he knew well, asking if the photomicrograph had been retouched. Receiving a letter back saying that it had not, Bailey concluded: "He has lied," and he never referred favorably to that man again. So far as I know he never saw him, spoke to him, or corresponded with him.

Yet, on another plane, one of Bailey's favorite quotations was from Mark Twain, that one should never spoil a good story by telling the absolute truth. Bailey was a delightful raconteur, and the reader is well advised to refer to *Up From Little Egypt*. To one who heard and enjoyed these stories on many occasions, it was obvious that, from time to time, the stories varied and one could never be sure of the "absolute truth."

Yet Bailey's intense striving for scientific truth in himself and in others led at times to difficulties. He was not popular with many of his contemporaries and was feared because he was so blunt and outspoken. Early in his career he attended a meeting of the American Neurological Association with his chief, Harvey Cushing. He sat near the front of the room. Three prominent members from New York City gave papers. First Frederick Tilney presented a paper on the pituitary gland, a subject with which Bailey was very familiar. When Tilney sat down, Bailey (not yet a member) rose to his feet to say that he did not believe what had been said. Shortly thereafter, Walter Timme gave a paper on the pineal body, which in Bailey's opinion was even worse than the first. He got up a second time to say so. The third paper was by Smith Ely Jelliffe, who reported that he had "cured" a boy with a sarcoma of the thigh with psychoanalysis. Bailey promptly rose to his feet a third time, but felt a tap on his shoulder. Harvey Cushing beckoned him out of the room, and when they got

to the hallway, said to him agitatedly, "What are you trying to do? Ruin your career? You will never become a member of this organization if you keep this up. Those three men are the most influential members of the American Neurological Association." Bailey subsided for the moment, but it would be an exaggeration to say that he, too, had been "cured."

Bailey loved his family—his wife Yevnigé, his daughter, Irene, and his son, Norman. During the last several years of his life, Yevnigé devoted almost every hour of her life to his care. In her own right Yevnigé was a distinguished musician, yet she subjugated her talent and interests to being Percival Bailey's companion and helpmate. This did not go unappreciated. On many occasions Bailey spoke of how fortunate he had been to have her as his wife.

Following his marriage on October 25, 1923, one of Bailey's principal interests was the Armenian people and their history. For many years he longed to go with his wife to visit Armenia, a state in the Soviet Union bordering on Turkey. One attempt was frustrated at the Yugoslav border. Finally, he received an invitation from the Armenian Academy of Science to lecture at the All Soviet Physiological Congress in Yerevan, the capital of Armenia. This was the opportunity for which Percy and Yevnigé had been waiting, and the trip proved to be all they had anticipated. Not only did Bailey lecture at the Congress, but he and his wife also took advantage of the opportunity to visit historical sites and other parts of the country.

In addition to his immediate family, Bailey had a second family—those who had trained with him. Without exception these men, whether they had spent a few weeks, months, or many years under his tutelage, greatly admired and respected him. Bailey never tried to take credit for the work of his associates, as heads of other departments not infrequently do. He was always generous with his time and would help his

men with their investigations, spend hours with them over the microscope, and help them with their writing. He was always available to discuss personal problems and to advise about many matters, particularly about plans for the future. If he thought that one of his men was considering a position that offered less opportunity than the man deserved, he said so. He was careful in his letters of reference and recommendation, lavish with praise when it was deserved, but never misleading. He taught his men in two ways—by his own example and by giving them the opportunity to find out for themselves.

Perhaps more than anyone else who was associated with him, I had the opportunity to see and appreciate all of these things. We were associated closely from the late summer of 1928 until his death in 1973. I was particularly privileged in this respect. For years we shared the same office, with our desks on opposite sides of the same room. Although our ages were not very different—he was twelve years older than I—our relationship at first was more that of father and son. Later our relationship became that of two brothers. In addition to being generous with his time and his knowledge, he was also at times generous with his money. His salary at The University of Chicago was always minimal. Yet on one occasion, when he was unable to obtain the agreement of the three department heads under whom he was supposed to work regarding the selection of a new resident and the payment of his salary, Bailey took the money from his own small salary to pay the man.

Bailey, in addition to being an excellent raconteur, wrote well of subjects other than science and medicine. He was a popular dinner guest at many fraternities and was invited to many student meetings. His tales of his life in Paris were enthusiastically welcomed throughout the campus. For many years he was a member of the Chicago Literary Club, of

which he was president from 1954 to 1955. The Club met every Monday night, except during the summer months. Bailey attended religiously and presented papers on many occasions. The quality of the papers and the enjoyment of the hearers could be judged by the size of the audiences. When Bailey spoke, the club rooms were crowded. Bailey's literary abilities are further evidenced in *Up From Little Egypt*, a collection of autobiographical vignettes. It is not an autobiography, nor was one ever written. Fond of quoting Mark Twain, he was often heard to remark, "As Mark Twain said, 'if no man ever yet told the truth about himself, it was because no one ever could.'"

Politically Bailey was a liberal and a Democrat. It is not surprising then that he often found fault with the American Medical Association and what it did and what it did not do. It was once pointed out to him that the policies and actions of the Association could not be changed unless men like himself were willing to participate actively in its affairs. He replied, "How could I possibly have anything to say which would influence the American Medical Association?" It was pointed out to him that it would be a simple matter to get him elected to the House of Delegates of the Association and that once there he could exert his influence. He was dubious but agreed to serve if elected. He was elected as the delegate of the Section on Nervous and Mental Diseases, a fact which he omitted from his *curriculum vitae*, though he did list his chairmanship of the Section on Nervous and Mental Diseases (1944). After one term as delegate, he had had all he wanted of medical politics and refused to be reelected. One term, however, gave him little opportunity to influence the course of the Association.

As the director of the National Institute for Neurological and Communicative Disorders and Strokes (NINCDS) informed me, Bailey was never appointed to a position of im-

portance in the National Institutes of Health because the FBI disapproved of his liberal ideas. No greater error of judgment could have been made. Bailey was a dyed-in-the-wool midwesterner, loyal to the United States and proud of his country. Even more important, he could have made valuable contributions to NIH and to the NINCDS.

Percival Bailey's neurological interests were broad and included neuroanatomy, neuropathology, neurophysiology, medical neurology, neurological surgery, and psychiatry. In the United States he was elected president of the leading neurological and neurosurgical societies—the American Neurological Association and the Society of Neurological Surgeons. He also held honorary membership in some twenty-five foreign medical and scientific societies. He was frequently invited to speak and delivered, among others, the Hughlings Jackson Lecture of the Montreal Neurological Institute and the Otfried Foerster Lecture of the German Neurosurgical Society. He served as visiting professor at many universities, both in this country and abroad. He was made an Honorary Doctor of Science by two of his alma maters, Southern Illinois University and The University of Chicago. The honor of which he was most proud was *docteur honoris causa de l'Université de Paris*, bestowed on him in 1949. His other numerous degrees, honors, and society memberships are listed at the end of this memoir. Throughout the world Bailey was recognized as the man with the broadest grasp of the nervous system. In every part of the field, he was Mr. Neurology.

Bailey's international recognition as an outstanding teacher, scientist, and neurosurgeon is well illustrated by a quotation from Clovis Vincent, professor of neurological surgery in Paris. In his inaugural lecture, Vincent paid the following tribute to his friend and colleague:

Bailey est mon ami. Grâce à lui, en quelque jours, j'ai compris la neuro-chirurgie américaine; grâce à lui je n'en ai pas vu seulement le dessus, mais aussi le dessous. À lui, j'ai pu poser des questions auxquelles il a répondu avec conscience et amitié, comme quelqu'un qui veut vous apprendre quelque chose. On peut dire que Bailey a été le trait d'union entre la neuro-chirurgie américaine et moi.

During the last few years of his life, Bailey suffered from two distressing illnesses. Neither the cause nor an effective treatment was ever found for either. Without warning he would have recurring bouts of chills and fever and, on occasion, would become delirious—spells that would last for days and incapacitate him. The possibility that this might represent an obscure form of malaria was considered but never proved. Quinine, for a short time, seemed to help, but it soon became apparent that this optimism was false. From time to time he also suffered from severe and extremely painful stomatitis. This would last for days, or even for a week or two. Here again the cause remained obscure and no treatment proved effective.

Another disability that plagued Bailey greatly was the loss of all useful vision in one eye and some blurring in the other, the result of a retinal degeneration. For a man who had spent a good share of his life at a binocular microscope, this was a severe blow. It greatly impaired his ability to continue with his pathological studies, although he still had an eagle eye for details that escaped many others.

In February of 1967, a real tragedy struck. It was a cold, windy, icy day in Chicago, and Bailey went to his office at the Illinois State Psychiatric Institute by taxicab. As he was walking from the cab to the building, he slipped on the ice and fell. He had some pain in his hip but did not believe that he had been seriously hurt. He remained at work, but when he returned home late in the afternoon he was so confused that

he could not tell Yevnigé what had happened. She was not aware that he had fallen or had pain in his hip, only that he was incoherent. She took him to the hospital, and for days his physicians despaired of his life.

It was not until a week after the accident that he became able to tell his wife and his physicians about the pain in his hip. X-ray examination then revealed that he had impacted the head of his femur into the pelvis, but his general condition was too poor to permit any attempt to reduce this fracture-dislocation. The joint ultimately became ankylosed, and when he was better, the disability with his hip greatly limited his ability to get about. For the rest of his life, this hip was his greatest burden.

Slowly he improved. At first he was able to move only with the help of his wife, who spent every moment, awake or asleep, with him. Later he mastered the use of two crutches and finally was able to get out of his house for short periods. Fortunately he remained alert and intensely interested in everything. For several years he welcomed my neurosurgical residents from Northwestern University to his home for an evening. On these occasions he would entertain them for hours about his own experiences, with vignettes from neurosurgical history, or with tales about such outstanding figures as Harvey Cushing or Pierre Marie. It was also during this period of enforced inactivity that he compiled autobiographical sketches into a book, *Up From Little Egypt*.

One chapter is missing from that book. "Pepper Pot" is about Harvey Cushing and Bailey's associations with him and was delivered before the Chicago Literary Club.² With his usual candor and consideration, Bailey sent a copy of "Pepper Pot" to Cushing's daughters, asking their approval for its publication. To his surprise he got back a letter threatening

² A text can be found in the Club's archives at The Newberry Library, Chicago.

him with a lawsuit if it were ever published. Advised by several distinguished legal friends that such a suit could never succeed, Bailey yet elected not to publish "Pepper Pot." As he said, "They have much more money than I do."

During the six years from 1967 until his death in 1973 (ages seventy-five to eighty-one), his greatest burden was his enforced inactivity and his dependence on his loving wife. There were marked fluctuations in his condition during this period, but the general level of his mental and physical health remained about the same. But in June of 1973 he became persistently less alert, at times confused, at others lethargic. The overall trend was now definitely downhill until August 10, 1973, when he became confused, then semicomatose, and died within a couple of hours.

The world had lost one of its most outstanding men—a man of catholic interests, both general and scientific—a truly renaissance man, the likes of which we shall probably never see again. And I lost a close personal friend and second father.

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