

## NECROLOGY

WILL E. EDINGTON, DePauw University

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### ARTHUR FISHER BENTLEY

Freeport, Illinois  
October 16, 1870

Paoli, Indiana  
May 21, 1957

Arthur Fisher Bentley at the time of his death was one of America's leading philosophers and humanists. He had spent the last forty-six years of his long life in contemplation and thought, living quietly on his estate near Paoli and occasionally publishing essays and books as the results of his work. He joined the Academy of Science in 1931 and frequently attended its meetings. One is not surprised at his interest in the Academy when one realizes the tremendous impact and influence of science on modern philosophic thought. The theory of evolution, genetic theory, relativity, quantum theory, postulational mathematics, indeterminism, nuclear theory, etc., have changed much of political, sociological and religious thought and practice during the past century. Fundamentally at every turn man is confronted with interpreting physical and mental phenomena with their possible multiple ambiguous relations and solutions, all apparently consistent with the known facts but not necessarily true to the facts. Scientists have been aware of this for several centuries and Arthur Bentley was deeply interested in fundamental thinking. He knew that consistency does not necessarily imply basic truth and he knew the necessity for careful definition and precise statement for basic understanding.

Arthur Bentley was born in Freeport, Illinois, on October 16, 1870, and died on May 21, 1957, in Paoli, Indiana. His father was a banker and a man of "unusual ability and intellectual candor." Young Bentley began his elementary education in Freeport and completed it in the Grand Island, Nebraska, schools. He then entered York College near Grand Island, but soon transferred to the University of Denver. After less than two years, ill health forced his return home where he worked temporarily in his father's bank. At the age of twenty he entered Johns Hopkins University and came under the influence of Dr. Richard T. Ely, the economist. When Ely transferred to the University of Wisconsin, Bentley changed his major interest from economics to sociology and graduated at Johns Hopkins in 1892 with the A.B. degree. He continued his study at that university, but spent the year 1893-94 at the University of Berlin and the University of Freiburg in Breslau. He received the Ph.D. at Johns Hopkins in 1895 and then became docent at the University of Chicago for six months, teaching sociology. At Chicago he became acquainted with John Dewey and there began a friendship that was to culminate in a joint philosophic work fifty years later.

Following his brief but important teaching experience Bentley took up newspaper work and served fifteen years as reporter and editorial writer on the *Chicago Times-Herald* and *Record-Herald*. From this he gained tremendous knowledge of, keen insight into and practical experience with human behavior and the attendant political and sociological problems. During this period, in 1908, he wrote his first book, "The Process of Government," which reflects the influence of Simmel, Gumplewicz and Durkheim in Europe and Dewey in America.

In 1910 Bentley gave up his newspaper work and the next year, at the age of forty, he settled on an estate just outside of Paoli, Indiana, where he spent most of the remaining forty-six years of his life extending and developing his philosophic thought. However, during World War I, 1917-19, he was chairman of the American Red Cross in Indiana. After the close of World War I the importance of Einstein's Relativity Theory became apparent in America following the experimental verification and agreement of Einstein's predicted results. The return of peace made available the works of Einstein, DeSitter, Eddington, Minkowski, Lorentz, and others. Bentley's contemplation of the four-dimensional world and its verified seeming contradictions of current explanations of phenomena based on the three-dimensional world, led to his second book, "*Relativity in Man and Society*," published in 1926. Further contemplation of the philosophic implications of Relativity and the postulational mathematical studies of Hilbert, Whitehead and Russell, and others, brought the appearance in 1932 of Bentley's "*Linguistic Analysis of Mathematics*".

Further study and development of his ideas led to the publication in 1935 of Bentley's book, "Behavior, Knowledge, Fact," and this work led to the collaboration of Bentley and John Dewey in the publication of eight joint papers, between 1945 and 1947, and their joint authorship, in 1949, of "Knowing and the Known". A number of his essays were brought together in 1954 in his last book, "Inquiry into Inquiries." A complete file of his manuscripts, published and unpublished, was given to Indiana University in 1953.

Because of Dr. Bentley's quiet career of writing and his modest disposition, his recognition and honors were belated. In 1953 he was made Honorary Vice-President of the "Conference on Methods in Philosophy and the Sciences." The American Humanist Association, in 1954, named him "Humanist of the Year." A Festschrift, "Life, Language, Law," a volume of essays contributed by such men as Sydney Ratner, P. W. Bridgman, George A. Lundburg, Sidney Hook, Adelbert Ames, Jr., and Felix Cohen, was published in 1956 in honor of Dr. Bentley. In its Epilogue appear the remarks made by Dr. Bentley at a dinner given in his honor in 1953 in Washington at the meeting of the American Political Science Association. At the Midwest Conference of the Humanist Association held in October, 1956, in Indianapolis, a symposium, The Transactional Approach to Human Behavior, was presented in honor of Dr. Bentley's 86th birthday, with Sydney Ratner, Richard W. Taylor and Harold T. Davis as speakers. This was Dr. Bentley's last public appearance and his last essay, "The Word Transaction," was read by Dr. Ratner.

The broad interest and depth of Dr. Bentley's thinking is evident from his membership in the American Association for the Advancement

of Science, the Econometric Society, the American Mathematical Society, the Mathematical Association of America, the Association for Symbolic Logic, the Philosophy of Science Association, the American Humanist Association, and the Indiana Academy of Science. The Academy honored him as a fellow in 1945.

At the Indianapolis meeting in Indianapolis in 1956 Dr. Ratner stated that Bentley could be likened to a modern-day Socrates "because he is not a preacher, nor is he a moralizer. In his works Bentley has tried to show the world how to live on a better standard through a study of the mistakes of others."

#### HALBERT PLEASANT BYBEE

Rochester, Indiana  
January 7, 1888

Austin, Texas  
March 30, 1957

Geology played a prominent part in the early history of Indiana and has influenced Indiana economy. The coal, shale and limestone industries were and are still quite important, oil is less so. In the last century gas production was a factor. Since the time of the New Harmony experiment, the Owen brothers, Edward T. Cox, Ryland T. Brown, John C. Branner, Willis S. Blatchley, Edgar R. Cumings, and Clyde A. Malott were leaders in the study of Indiana geology. Indiana University has offered courses in geology since the Civil War days and DePauw, Earlham and Wabash also have been training many young geologists for a long time. One of Indiana University's outstanding graduates who earned his doctorate in geology was Halbert Pleasant Bybee who spent most of his professional life of over forty years in Texas.

Halbert Pleasant Bybee was born near Rochester, Indiana, on January 7, 1888. After completing his public school education he entered Rochester College, which existed at that time in Rochester, Indiana, and received the B.S. degree. He was Principal of the Township High School at Richland Center for a year and then taught science the next year in Clinton College, Clinton, Kentucky. In 1911 he entered Indiana University, received the A.B. in 1912, was made a Fellow in Geology and received the A.M. in 1913, followed by the Ph.D. in 1915. However, preceding his receiving the doctorate, in January, 1914, he became an instructor in geology at the University of Texas. There he served the University and the State for the rest of his life, with the exception of the four years, 1924-1929, while he was geologist for the Dixie Oil Company in San Angelo, Texas. He worked several summers as geologist with Oklahoma Geological Survey in Norman, Oklahoma.

Dr. Bybee's professional career was divided between teaching, consulting, and acting geologist in charge of the large land holdings owned by the University of Texas. At the University he was made Adjunct Professor of Geology in 1916 and an associate professor in 1920. Following his four years with the Dixie Oil Company he was appointed, in 1929, geologist in charge of University Lands with San Angelo as his headquarters. Eight years later he was transferred to Austin and made Geologist in charge of University Lands and Professor of Geology at the University. From 1954 until his death on March 30, 1957, he was Consult-

ing Geologist on University Lands and Professor of Geology. He served as Chairman of the Geology Department from 1937 to 1941.

While a student at Indiana University Dr. Bybee joined the Academy of Science in 1912 and his first research was done in collaboration with Clyde A. Malott: "The Flood of 1913 in the Lower White River Region of Indiana," an article of 119 pages published as part of Indiana University Bulletin 12. Because of his consulting and administrative duties his time for research was restricted and he published only occasionally in the University of Texas Bulletins or the Bulletins of the American Association of Petroleum Geologists. He was author or joint author of more than a dozen papers.

Dr. Bybee was a Fellow in both the American Association for the Advancement of Science and the Geological Society of America. He was a member of the Geophysical Union, a life member and an honorary member of the American Association of Petroleum Geologists, a charter member and secretary for one year of the Southwestern Geological Society, and an Honorary Life Member of the Texas Academy of Science, and a member of the Society of Economic Paleontologists and Mineralogists. He was also a member of Sigma Xi and Sigma Gamma Epsilon, honorary geology and petroleum engineering fraternity.

As a public spirited citizen, he was deeply concerned with community welfare. A past president of the San Angelo Kiwanis Club, he became active in the Austin Kiwanis Club after leaving San Angelo and was a member of the Austin Chamber of Commerce. He was deeply interested in Boy Scout work and served for twenty-nine years as an Area Council member. He was also a Faculty sponsor at the University for the national scouting fraternity Alpha Phi Omega. In recognition of his service to Scouting he received the Silver Beaver Award, the highest award given to Area Council members.

Dr. Bybee was a deeply religious man who tried to live his religion. He served as deacon in the University Baptist Church and a long time member of the University Committee on Religious Life. Many a Texas student troubled by the seeming contradictions of scientific facts with religious teachings came to him for counsel and advice. The University availed itself of his experience and wisdom by appointing him a member of committees to set up an Institute of Latin-American Studies and to cooperate with the Department of Education in setting up a program of Teacher Education for Science Teachers. Dr. Bybee rendered genuine and lasting service to science, to his adopted State and to his fellow men.

#### JOSEPH BERNARD HERSHMAN

Rensselaer, Indiana  
June 9, 1900

Marengo, Iowa  
June 29, 1956

With the death of Joseph Bernard Hershman on June 29, 1956, two days after being mortally injured in an automobile accident near Marengo, Iowa, Indiana lost one of its leading educators who was at the zenith of his career. Dr. Hershman was a distinct Indiana product, born in Rensselaer on June 9, 1900, graduating from Valparaiso University with the B.S. degree in 1922, and receiving the M.A. in 1928 and

the Ph.D. in 1932, in physics, from Indiana University. There he received much of his fundamental training in electronics and communications under Dr. R. R. Ramsey.

Following his graduation from Valparaiso University he remained at that institution for the next five years as instructor and head of the Department of Physics. He then went to Indiana University as an instructor and completed the work for the M.A. degree after which he accepted a position at Indiana State Teachers College as Assistant Professor and acting Head of the Department of Physics and Director of Broadcasting. Returning to Indiana University in 1931 as a graduate student and assistant in physics, he remained two years. In 1934 he accepted a position as Director of the Dodge Telegraph and Radio Institute and seven years later became its president. In 1944 he founded the Valparaiso Technical Institute and became its first president, which position he held at the time of his death.

In his founding of the Institute Dr. Hershman attempted to carry out his philosophy of education, insisting that the goals of the Institute were not those of the traditional engineering school but rather the training of specialists in electronics and communications. At the time of his death he had succeeded in building up a physical plant capable of handling efficiently 500 students and he had secured the cooperation of a number of leading firms such as International Business Machines, General Electric, Western Electric and the Sandia Corporation, in promotional work to get more students to train for careers in electronics and communications.

Dr. Hershman was civic minded and served for years as president of the Valparaiso Public Library Board and he was a past president of both the Valparaiso Park Board and the Valparaiso Chamber of Commerce. Professionally he held membership in the American Association for the Advancement of Science, the Institute of Radio Engineers, the American Association of Physics Teachers, the Society of Motion Picture and Television Engineers. The accident which caused his death occurred while he was returning from a meeting of the American Society of Engineering Education held in Ames, Iowa. In both 1954 and 1955 he was president of the National Council of Technical Schools. He was also a member of Sigma Xi and Alpha Epsilon professional societies. He first joined the Indiana Academy of Science in 1926 and published six papers in the *Proceedings* from 1927 to 1933. He was made a Fellow of the Academy in 1954. Besides being author of a number of scientific papers he published three books the last of which, "A Vocational Guide in Radio, Electronics and Television," appeared in 1953.

Dr. Hershman was recognized nationally by industry as an outstanding educator who had a broad understanding of the complex technological structure of American industry and who had made a great and most timely contribution in the training of young men to take their places effectively in a society whose progress and welfare is dependent on scientific and technological achievement. As one tangible recognition of his work the Board of Directors of the Valparaiso Technical Institute authorized as a memorial to Dr. Hershman the establishment of a scholarship, ultimately to be worth approximately \$1,500, to be awarded annu-

ally to a high school senior ranking in the upper quarter of his class, majoring in mathematics and science, and interested in a technical education in electronics and communications. The death of Dr. Hershman is a great loss to this nation beset with the problem of securing trained scientists at a critical stage in our history.

#### JOHN HOBART HOSKINS

Carmel, Indiana  
January 17, 1896

Cincinnati, Ohio  
February 8, 1957

The Academy has been fortunate in having some outstanding out-of-state members and frequently they participate in Academy programs, making genuine scientific contributions to its work. Such a member was John Hobart Hoskins, a member of the Academy since 1927, who at the time of his death on February 8, 1957, had been Chairman of the Department of Biology and Bacteriology at the University of Cincinnati for over twenty-five years.

John Hobart Hoskins was born in Carmel, Indiana, on January 17, 1896, in a Quaker environment, and in due time entered Earlham College where his mother and older brother had been students before him. After receiving the A.B. degree in 1919 he immediately began graduate study in the University of Chicago and obtained the M.S. degree in 1920. The following two years he taught as Professor of Biology at Whittier College in California while he spent the summers of 1921 and 1922 in study at the Puget Sound Biological Station of the University of Washington. Granted a fellowship by the University of Chicago in 1922 he completed the work for the Ph.D. in botany and received the degree in 1924. The next year he spent in Europe as a National Research Council Fellow and upon his return in 1925 he was appointed Assistant Professor of Botany at the University of Cincinnati. He was promoted to associate professor in 1927 and to professor in 1937, but he had been appointed chairman of the department in 1931. He also spent the summers of 1925 to 1933 on the staff at the University of Notre Dame where he became associated with Father Julius Nieuwland and Theodor Just. Father Nieuwland had founded the *Midland Naturalist* in 1909 and in 1935 Dr. Hoskins became and remained an associate editor for twenty years, with his special interest in paleobotany.

Dr. Hoskins specialized in the study of fossil plants and his research on the coal ball, a type of plant petrification, gave information on the plant source of coal which led to the location of productive areas in coal fields. He was the author of approximately forty published research articles. Five of these articles appeared in the *Proceedings* of the Academy. He also presented three other papers to the Academy, one co-authored by Theodor Just. Although he was most widely known because of his work in paleobotany, he also did research in algology and plant morphology. He was particularly successful in training a number of younger paleobotanists. He built up a large collection of fossil plants at the University of Cincinnati and he collected a large number of reprints and other works on paleobotany for his own library. Following his death the University announced that the collection of fossil plants will hence-

forth be known as the John Hobart Hoskins Memorial Herbarium, and his library, the gift of Mrs. Hoskins to the Department, will be housed with the collection. Also the J. H. Hoskins Memorial Fund contributed by friends and colleagues will be used for scholarships in paleobotany at the University.

Dr. Hoskins was a Fellow of the American Association for the Advancement of Science and an active member of the Botanical Society, twice served as chairman of its Paleobotanical Section. He was also a member of the American Institute of Biological Sciences, the Paleontological Society of America, the Phycological Society of America, the International Society of Plant Morphologists, and the Ohio, Illinois and Indiana Academies of Science. He was a past president of the Ohio Academy and a Fellow of the Indiana Academy. He was also a member of Phi Beta Kappa and Sigma Xi, and the Alpha Tau Omega social fraternity.

Besides his assistant editorship of the *American Midland Naturalist*, Dr. Hoskins was co-founder and assistant editor of *Lloydia*, a quarterly journal on biological science published by the Lloyd Library of Cincinnati. He was a member of the Lloyd Library Board and of the Cincinnati Country Day School Board. From 1946 to 1953 he was regional representative of Earlham College. He served in the Army in World War I from 1917 to 1919, and during World War II he was with the War Department, Training Branch, Quartermaster Corps, from 1943 to 1945.

Dr. Hoskins was well and favorably known by a large number of botanists in the Academy who recognized him as the excellent scientist that he was. In his own University he was known as a man of high ideals, a stimulating and inspiring teacher and "an exacting scholar with a vast store of knowledge, a sparkling personality with a ready wit and a man of deep human sympathy."

#### HENRY AUGUSTUS HUSTON

Damariscotta, Maine  
April 20, 1858

Kew Gardens, New York  
May 4, 1957



When the Indiana Academy of Science was founded in December, 1885, the charter membership roll was kept open for possibly a year

and during that interval the charter membership became fixed at 69 members. The eldest member at that time, so far as can be determined, was Ryland T. Brown, born in 1807 and probably one of Indiana's most prominent scientists at the time. One of the younger charter members at the time, but by no means the youngest, was Henry Augustus Huston who was born on April 20, 1858, and whose death on May 4, 1957, brought to a close a period of 150 years, beginning at the time when Thomas Jefferson was President of the United States and extending to the presidency of Dwight Eisenhower, during which period a charter member of the Academy was alive.

Henry A. Huston was born in Damariscotta, Maine. He received the A.B. degree from Bowdoin College in 1879 and spent the following year there as an assistant in chemistry and physics. In 1880 he came to Lafayette, Indiana, as principal and science teacher in the high school, serving four years, during which time he received the M.A. degree at Bowdoin and the Analytical Chemist degree under Harvey W. Wiley at Purdue, both in 1882. He became Professor of Physics at Purdue in 1884 and assistant State Chemist. In 1888 he was made Professor of Agricultural Chemistry and served for fifteen years, during which time he helped to organize the Agricultural Experiment Station and was its Director in his last year at Purdue. He was also director of the State Weather Service in Indiana from 1884 to 1896. Leaving Purdue in 1903 he became manager of the West Office, Propaganda Department, German Kali Works, located in St. Louis for two years and then in Chicago for another five years. He transferred to Baltimore in 1910, as secretary, and then to New York in 1912. In 1919 he became technical manager in the U.S. Potash Syndicate, and four years later a consulting agricultural chemist, finally retiring in 1953 at the age of 95. In 1931 Purdue conferred the honorary Doctor of Science degree on him.

Dr. Huston throughout his long life retained a deep and loyal interest in Purdue. He served as president of the Purdue Alumni Association for nine years from 1895 to 1904. He returned frequently to the campus, particularly to attend the May Commencement exercises. In 1942 he was awarded the "sixty year" certificate and five years later he received the distinguished service award of the Purdue Alumni Association. In May of 1953 he rode in a helicopter from Camp Atterbury to the Purdue Airport, his first ride in a helicopter, to attend the gala week exercises. As the oldest living Purdue alumnus he enjoyed leading the gala week alumni parade. He was blessed with good health and he retained his vigor almost to the end of his life. He loved to travel. In 1925 he made a plant food survey in Italy and later made several other trips to Europe and he enjoyed going to South America, frequently making one or two trips a year. He owned an eighty-year-old flute which he carried with him on his foreign travels and he was often called on to play solos at ship's concerts. Shortly before his death he received an honorary membership in the Association of Musicians of Greater New York City.

In his younger days he did considerable research in agricultural chemistry and agronomy, especially while he was at Purdue. He published a number of papers, several of which appeared in the *Proceedings* of the Indiana Academy of Science in the early volumes, the last appear-



ing in 1909. He was joint author of several papers. He held membership in the Association of Agricultural Chemists, the American Chemical Society, and the Society of Agronomists. He retained his interest in the Academy but he was unable to attend the Fiftieth Anniversary Meeting in 1934 when he was one of the fifteen living Charter Members to receive the fifty-year Recognition Certificates.

Dr. Huston's death breaks the last living tie with the early days of the Academy. Among the charter members were many outstanding scientists, nationally and internationally recognized: Butler, Jordan, the Coulters, Blatchley, Wiley, Mendenhall, Noyes, Arthur, Kirkwood, Braner, and others. Dr. Huston knew them all and has gone to join them.

WALTER ALBERT JAMIESON

Utica, New York  
May 10, 1890

Traverse City, Michigan  
June 5, 1957

While it is true that a large number of the most active members of the Academy come from the universities and colleges of the State, a number of the most productive members are associated with industry. The Academy has drawn five of its past presidents from Eli Lilly & Company and over the years members of that great industrial organization's scientific staff have contributed much to the scientific prestige of the Academy. One such member was Walter Albert Jamieson who was actively associated with Eli Lilly & Company thirty-two years before his retirement in 1949.

He was born on May 10, 1890, in Utica, New York, and received his preliminary education in the Utica schools. He graduated from the Utica Free Academy and then entered Trinity College, Hartford, Connecticut, received the A.B. degree in 1911 and thirty years later, had the honorary Sc.D. conferred on him. Following his graduation from Trinity he accepted employment as immunologist and bacteriologist in the Lederle Antitoxin Laboratories at Pearl River, New York, and six years later was appointed Assistant Director of the Biological Division of Eli Lilly & Company. In 1923 he was promoted to Director of the Biological Division (Production) and Biological Research which position he held until his retirement.

Dr. Jamieson directed research on bacterial antigens, viruses, toxins, antitoxins, germicides and biological preservatives. He introduced "Merthiolate" which is now accepted as a standard preservative for diphtheria prophylactics, serums for intravenous, intraspinal and intrathecal injections, and blood serum or plasma for transfusion work. During World War II he worked closely with the Army and Navy, had charge of the Blood Bank, was an advisor on the preservation of blood plasma supplied to Great Britain, and had charge of the accelerated research and production of vaccines for gas-gangrene, cholera, typhus, influenza and Japanese encephalitis. In his work with these dangerous substances he contracted typhus twice and was the victim of other serious laboratory induced infections. The results of his research, published in about 50 articles—a number of which were in collaboration with his colleagues at the Eli

Lilly & Company—appeared in such journals as the *Journal of Laboratory and Clinical Medicine*, *Proceedings of the Society of Experimental Biology and Medicine*, *American Journal of Hygiene*, *Journal of Immunology*, and others. He was joint author with Dr. H. M. Powell of ten papers that were published in the *Proceedings of the Academy* from 1931 to 1943.

In addition to being a member of such organizations as the Society of American Bacteriologists, American Association of Immunologists, and the Canadian Health Association, he was also a charter member of the Electron Microscope Society of America and a Fellow of the American Association for the Advancement of Science, American Public Health Association, Royal Society of Tropical Medicine and Hygiene and the Indiana Academy of Science, and a trustee of the American Foundation for Tropical Medicine. He was chairman at various times and secretary of the Biological Section of the American Drug Manufacturers Association and was asked to speak at the 1957 meeting of the Section. He held membership in the Indianapolis Chamber of Commerce and the Indianapolis Athletic Club and he belonged to the Alpha Chi Rho social fraternity. During World War II he was a member of the Biological Subcommittee of the Drug Resources Advisory Committee of the Army and Navy Munitions Board and of the Gas-Gangrene Antitoxin Producers Industry Advisory Committee of the War Production Board.

Dr. Jamieson was a deeply religious man and a very active member of the Episcopal Church. Besides service in the vestry of local Indianapolis churches he was Trustee of the Indianapolis Diocese for twenty years. As Treasurer of the Indianapolis Episcopal Diocese from 1941 to 1957 he visited all missions and parishes throughout Indiana each year and thus became well known. He was also Secretary of the Diocese from 1953 to 1957 and was a delegate to the last general convention held in 1955 in Hawaii. Since his death a number of churches in the State have set up memorials dedicated to his memory and the swimming pool in the church camp in Brown County has been named after him. Besides his church work he was Founder of the Indianapolis Chapter of the National Society for the Prevention of Blindness and served as its secretary and a member of its Executive Board the last four years of his life.

Following his retirement in 1949 Dr. Jamieson made his home at Green Braes Orchard outside of Indianapolis. When not busy with his church work he pursued several hobbies such as making a collection of air mail stamps, experimenting with chemical water culture of vegetables and working with boys. He had a summer home, Loch Hame, on Torch Lake near Alden, Michigan, where he had a greenhouse in which he carried on experimental work the last eight years of his life. He also became interested in the South Torch Lake Recreational Association at Alden, helping to organize baseball teams for boys and officiating as an umpire on occasion. In Boy Scout work in Indiana he was a member of the New Augusta Pack Committee the last year he lived.

With the death of Dr. Jamieson on June 5, 1957, in a Traverse City, Michigan, hospital, following a coronary attack, Indiana lost a fine citizen, a sincere churchman, and an excellent scientist and administrator.

## HENRY REIST KRAYBILL

Mt. Joy, Pennsylvania  
May 1, 1891

Chicago, Illinois  
September 30, 1956

One of the most productive research scientists of this century to be associated with the Indiana Academy of Science was Henry Reist Kraybill. He was author or joint author of nearly 150 research papers, bulletins and reports, published in more than 25 leading scientific and trade journals, in agricultural chemistry, chemistry, botany, food and meat preservation. He was also joint author of Bulletins or Reports issued by Agricultural Experiment Stations in four states: Pennsylvania, Oregon, New Hampshire and Indiana. He and his associates were also granted 13 patents based on research done under his supervision. Not only was he a splendid researcher but he also had administrative ability of high order, which received recognition in his university, industrial and professional appointments. At the time of his death in Chicago on September 30, 1956, he was Vice President and Director of Research of the American Meat Institute Foundation, Director of the Department of Scientific Research of the American Meat Institute, and professorial lecturer in the Department of Biochemistry of the University of Chicago.

He was born on May 1, 1891, in East Donegal Township, Lancaster County, Pennsylvania, near Mt. Joy. In 1909 he entered Pennsylvania State College and graduated in 1913 with a B.S. degree in agricultural chemistry. After graduation, while still retaining his connection with Penn State as assistant chemist and instructor in agricultural chemistry, he completed the requirements at the University of Chicago for the M.S. degree in 1915 and for the Ph.D. in plant biochemistry in 1917. He was a teaching fellow at the University of Chicago during the year 1916-1917. His doctoral thesis was a joint research problem with E. J. Kraus, of the Oregon State Agricultural Station, in the study of the physiology of the tomato plant, and it has since become a classic in plant physiology that made the names of Kraybill and Kraus well known to European scientists working in that field. Following the granting of his doctorate he returned to Penn State as an assistant physiologist, Bureau of Plant Industry, U. S. Department of Agriculture, and two years later he was appointed Professor and Head of the Department of Agricultural Chemistry at the University of New Hampshire, and also State Chemist. In 1924 he went to the Boyce Thompson Institute for Plant Research as a biochemist and two years later he accepted a professorship in agricultural chemistry at Purdue University together with the appointment as Indiana State Chemist and Seed Commissioner.

While at New Hampshire Dr. Kraybill became interested in plant viruses, particularly a tomato virus, and a series of papers followed during the next ten years on the results of the filtration, inoculation and purification of a tomato virus as well as the properties of the virus. He worked out methods for a high purification of the virus, determined accurately its activity at certain acidity and alkalinity levels, ascertained the conditions under which the virus could be stored, and determined its properties to pass certain filters which are known to remove bacteria. "Had Dr. Kraybill taken this work a step further and crystallized the

virus, he would have accomplished essentially what Dr. Stanley did several years later in working with the tobacco mosaic virus. Dr. Stanley was awarded the Nobel Prize for his work."

Dr. Kraybill was promoted to the headship of the Department of Agricultural Chemistry at Purdue in 1934. He remained at Purdue fifteen years during which time much of his research was devoted to the study of plant oils, especially soy bean oil and its utilization. He also worked on nutrition studies and he with two colleagues discovered the symptoms of tryptophan deficiency in the white rat, which is believed to be the first description of an amino acid deficiency in animals. Several patents were granted him and associates working under the Purdue Research Foundation.

In 1941 he became Director of the Department of Scientific Research of the American Meat Institute and he also became professorial lecturer in biochemistry at the University of Chicago that same year. He became Director of Research and Education of the American Meat Institute Foundation in 1947 and was made a Vice President in 1955.

During World War II Dr. Kraybill and his colleagues worked with considerable success on the problems of dehydrating and compressing meat because of the limited shipping space in cargo vessels and the shipping losses by submarines. Following the war their attention was concentrated on antioxidants in foods whereby rancidity in fats would be retarded and the storage life of foods would be extended. A number of interesting effects of irradiation in the sterilization of foods were discovered and put to practical use.

In 1949 as consultant to the Chief of the Economics Cooperative Administration Dr. Kraybill was sent to Greece on a mission.

Dr. Kraybill was a member of 15 scientific societies and eight honor fraternities and technical clubs. He was a Fellow of the American Association for the Advancement of Science, the American Institute of Chemists and the Indiana Academy of Science. From 1936 to 1938 he was chairman of the division of agricultural and food chemistry of the American Chemical Society. He served as president of both the Association of Official Agricultural Chemists and the American Association of Feed Control Officials in 1932, and of the American Society of Plant Pathologists in 1938.

Dr. Kraybill was stricken with a serious illness toward the end of 1955 and seemingly recovered but passed away on September 30, 1956. However, before his death, Purdue University, on June 3, 1956, conferred the honorary Sc.D. on him "in recognition of his devoted service to this (Purdue) university and for his distinctive achievements as a scientist, teacher and administrator whose contribution to biochemistry, plant production, and food processing have advanced the science of agriculture with resulting benefit to all people." And on September 20, 1956, he was informed that the 1956 Dodge and Olcott Award had been conferred on him "in recognition of scientific accomplishments of outstanding and lasting significance in connection with the processing of meat and meat products."

Quiet and unassuming, but noted for his fearless but kind integrity, he sought little recognition for himself and was always ready to help

others. An excellent teacher and administrator, a stimulating scientist with vision and imagination, a churchman with a deep sense of responsibility to humanity, and a man devoted to his family and friends, Henry Reist Kraybill left the world better than he found it. He was a truly outstanding man and scientist.

PHILIP LUGINBILL

Columbus Grove, Ohio  
October 16, 1886

Lafayette, Indiana  
December 16, 1956

There was a time in this country when research was carried on largely as an individual matter, and individuals were associated with and credited with the results. The principal exceptions to this were in the Federal agencies like the U.S. Department of Agriculture where the problems were too broad and comprehensive to be solved by individual effort and required team work. Once the universities were the principal seat of research but with the development of the great industrial research laboratories, the financing of great research projects by Foundations, and the tremendous growth of Federal research programs, teamwork is the necessary basis for success and joint credit to a group rather than to individuals is becoming the rule rather than the exception. The complex problems in health, old age, economics, industry, agriculture, defense, et cetera, require the pooled efforts of many specialists. The common good demands the ultimate in unselfish cooperation if the problems are to be solved. Individuals will still stand out but their success will depend on the work of their colleagues which the individual uses to deduce his findings.

The success of modern agriculture in the United States is due to the pooled efforts of thousands of chemists, botanists, zoologists, inventors, industrialists and farmers—theoretical and applied experimenters, with time as an essential element. Philip Luginbill was one of that great team of entomologists of the Department of Agriculture. He devoted forty years of his life to the study of cereal and forage crop insects. He was the author of many research papers on economic entomology and the classification of insects.

Philip Luginbill was born at Columbus Grove, Ohio, on October 16, 1886. Following the usual public school education he taught in the public schools of Ohio for two years, 1904 to 1906, and then entered Ohio State University where he received the B.S. in Agriculture in 1910. He immediately entered government service in the Bureau of Entomology and Plant Quarantine, U. S. Department of Agriculture, receiving his first appointment through the efforts of John J. Davis, who had just come to Purdue University to take charge of the Cereal and Forage Insect Laboratory at the University, and he and Professor Davis remained lifelong friends. Dr. Luginbill was sent two years later to Columbia, South Carolina, to take charge of the Federal insect laboratory affiliated with the University of South Carolina. During his stay of eight years at Columbia he completed the work for the M.A. degree in 1917 at the University. In 1920 he was transferred to Monroe, Michigan, to take charge of research on the corn borer. While in Monroe he completed the

requirements for the Ph.D. in biology at George Washington University and received the degree in 1924. In 1933 he returned to Lafayette as Senior Entomologist in charge of the Federal research laboratory in entomology with his offices in the Federal Building but affiliated with Purdue. He retired from government service in 1950.

Dr. Luginbill was a Fellow in the American Association for the Advancement of Science, which he joined in 1910, and of the Entomology Society of America. He was also a member of the American Association for Economic Entomology, and the South Carolina, Ohio and Indiana Academies of Science.

After his retirement he continued to live in West Lafayette and at the time of his death he had just completed a two year term as president of Lafayette Civil Service Club. An active churchman he had served the Central Presbyterian Church in Lafayette as superintendent of its Sunday church school for twenty years, and he had also participated in the church's Senior Fellowship workshop.

Dr. Luginbill was a hard and conscientious worker, thoroughly interested in his field of science, and a faithful servant of his country. It is impossible to estimate how much the farmers of the Middle West owe to his efforts in controlling the insect pests. He left an enviable record as a fine entomologist, an excellent civil servant, and a good citizen who worked for the welfare of humanity, both youth and adult.

#### DANIEL CHARLES O'GRADY

Depot Harbor, Ontario, Canada  
January 7, 1905

South Bend, Indiana  
May 7, 1957

With the death of Daniel Charles O'Grady, following a heart attack on May 7, 1957, the Academy lost for this year its second prominent philosopher and psychologist. He was born in Depot Harbor, Ontario, Canada, on January 7, 1905. He received the Bachelor of Philosophy degree at the University of Ottawa in 1924, the A.M. degree at Catholic University of America, Washington, D. C., in 1926 and the Ph.D. in Philosophy at the University of Ottawa in 1927.

He joined the Faculty at Notre Dame in 1926 as an instructor in philosophy, was promoted to assistant professor in 1930, associate professor in 1937 and to a professorship in 1940. Granted a leave by the University in 1942, he entered the military service as a private soldier, served as a clinical psychologist and personnel consultant on the staff of the Adjutant General School at Fort Oglethorpe, Georgia, and was discharged in 1945 with the rank of captain. After the war, in addition to his work at Notre Dame, he lectured in the Indiana University Extension Center at South Bend. He had served as a psychological consultant at the Northern Indiana Children's Hospital since 1950, and at the Beatty Memorial Hospital, Westville, Indiana, since 1951. He became a citizen of the United States some years ago.

Dr. O'Grady was coauthor with the Rev. Charles C. Miltner, C.S.C., former Dean of the College of Arts and Letters at Notre Dame and now President of the University of Portland, Oregon, of an outstanding book, "Introduction to Metaphysics," published in 1930, which is widely used

as a textbook in many colleges both in America and England. He also published in 1932, another book, "Cosmology: A Cross Section," in the preparation of which he studied for some time at the Dominion Astronomical Observatory in Ottawa. He was also author of 23 articles and essays published in such journals as the *Proceedings of the American Catholic Philosophical Association*, *The New Scholasticism*, *The Thomist*, *Encyclopedia of Religion, America*, *The Catholic School Journal* and the *University of Ottawa Review*. He also wrote about 50 book reviews which appeared mostly in the *University of Ottawa Review* and *The New Scholasticism*. In 1946 he was appointed associate editor of *The New Scholasticism*.

He was a member of the American Association for the Advancement of Science, the Royal Astronomical Society of Canada, the Medieval Academy of America and the American Catholic Philosophical Association. Also as a member of the Indiana Psychological Association he had served at one time as its secretary and treasurer. Dr. O'Grady joined the Indiana Academy of Science in 1954 and consequently was not well known to many members of the Academy. However it is deeply to be regretted that this able teacher, philosopher and psychologist was stricken at the height of his powers.

#### GUY STANTZ

Coal City, Indiana  
October 31, 1884

Colorado Springs, Colorado  
June 22, 1955

One of the big problems after retirement is having something to do, particularly if one has led an active life. Guy Stantz who at the time of his retirement was Principal of Gerstmeyer Technical High School in Terre Haute, Indiana, solved that problem by taking up hobbies requiring some knowledge of botany, geology, anthropology and travel. These interests led him to join the Indiana Academy of Science in 1952 when he was 68 years old. He was on a vacation trip in Colorado when he died suddenly on June 22, 1955, of a heart attack in Colorado Springs.

Guy Stantz was born on October 31, 1884, in a log cabin in Owen County near Coal City, Indiana. He attended the district schools and graduated from Worthington High School, after which, in 1905, he began teaching in the district schools of Greene County. This was about the time that the state began to require at least one quarter of professional training and since many of the country schools of that day were on a six or seven months yearly term, teachers flocked to the State Normal School in Terre Haute for the spring and summer quarters, at times tripling the enrollment as compared to the normal fall and winter quarters. Mr. Stantz began his professional training in what was then called manual training, now industrial arts, at the Normal. He acquired a certain prominence while there because of his athletic ability as a dash man, hurdler, pole vaulter and broad jumper, and he served on the Faculty-Student Athletic Board in 1908 and 1909. He became a teacher of mathematics and industrial arts in 1909 in Salem, Indiana, remaining one year, and spent the next two years teaching science and industrial arts and coaching in the Centralia, Illinois, High School. In 1912 he

returned to Terre Haute as teacher of industrial arts in the high school. Five years later he accepted a similar position in Cleveland Heights, Ohio. He returned again to Terre Haute in 1919 as head of the department of industrial arts and athletic coach in Wiley High School. In 1923 he was appointed Principal of the Boys Vocational School and supervisor of industrial arts and director of vocational education, and during the next two years he developed the Vocational School into a technical high school called Gerstmeyer Technical High School. He continued as Principal of this school until his retirement in June, 1953.

While Mr. Stantz taught steadily year after year he nevertheless succeeded in graduating with the B.S. degree in 1927 from the Indiana State Normal School, which name by legislative action in 1929 was changed to Indiana State Teachers College. He continued with graduate study at Indiana University and received the M.S. degree in 1929.

Mr. Stantz was a far-seeing educator and principal. In Gerstmeyer High School he set up a program making vocational training a part of the regular high school curriculum and he pioneered the guidance movement in Terre Haute. His school had the first Home Room program in Indiana, and in addition to the day school he operated a night school for adults which met a real educational need.

Professionally he was a member of the local, State and National educational associations, the Vocational Association, the Vocational Guidance Association, the Association of Vocational School Principals, the Wabash Valley Industrial Education Club, and Phi Delta Kappa, education fraternity. In 1929 he was president of the Indiana Vocational Directors Association.

He was civic minded and interested in all phases of youth work. As a member of the Kiwanis, service club, he enlisted its active support in the Boy and Girl Scouts, particularly in the development of their camps. He was a long time member of the Wabash Valley Area Boy Scout Council and in recognition of his long and faithful service he received, in 1947, the Silver Beaver Award, the highest honor conferred on a volunteer worker in the Area. One of the two lakes in the Area Camp Krietenstein was named Stantz Lake in his honor.

Guy Stantz was a lover of nature and an out-door man. He was interested in conservation and the development of out-of-doors recreation centers. He was active in the Isaac Walton League and in the National Park Association, and was President of the Dobbs Memorial Forest.

He was a practical Christian. He had no children of his own but on the death of his wife's brother he and Mrs. Stantz willingly and faithfully reared and educated the five children who were left.

Educator, administrator, civic leader, and devoted friend of youth, Guy Stantz lived a full and fruitful life.

#### SISTER CARMELLA WELTE

Terre Haute, Indiana  
January 2, 1890

Chicago, Illinois  
January 15, 1966

Church supported schools have played a very important part in our history, both in the nation and in this state. At the time the Academy



was founded a church school, DePauw, was the largest school in the state, and at the present time another church school, Notre Dame, is the third largest university in the state. Science, being nonsectarian, provides an excellent means for teachers from all the colleges and high schools of the state to get together voluntarily for a profitable, valuable and friendly exchange of ideas and information. And for many years the Academy has counted as members a number of Sisters from the Catholic colleges for women as well as from some of the parochial high schools associated with the Junior Academy, and frequently papers are presented and research findings are discussed by these dedicated women. Sister Carmella Welte had been a member of the Academy thirty-one years and as a member of the teaching staff of Saint Mary of the Woods College she had frequently attended Academy meetings.

Sister Carmella Welte was born Ada Welte, on January 2, 1890, in Terre Haute, Indiana. She received her early education in the public schools of Terre Haute, entered the Indiana State Normal School, now the Indiana State Teachers College, and graduated in 1913 with the A.B. degree. She spent the next two years teaching German in King Crawford Classical School in Terre Haute and then returned to the Normal School for a year of post-graduate study. During the two years from 1916-18, she taught German in Bartholomew County and then taught Latin and English for a year in Fontanet High School in Vigo County. In 1919 she entered the convent of the Sisters of Providence at Saint Mary of the Woods near Terre Haute.

Her first year of study at Saint Mary of the Woods College was devoted to English and she received the A.B. in 1920 from the College together with a teacher's certificate. She then entered Purdue for six months of study in bacteriology, biology and chemistry after which she returned to Saint Mary of the Woods College and taught biology and botany. She spent the year 1922-23 and the summers of 1923, 1924 and 1925 at Indiana University and received the A.M. degree in 1925. She continued teaching biology at the College until 1945 with the exception of the year 1933-34 when she returned to Indiana University for further study.

In 1945 symptoms of heart trouble became apparent and with the hopes of improving her health she was assigned lighter employment in a smaller school. She spent the next three years in Marywood School in Evanston, Illinois, and the following year at St. John's Academy in Indianapolis. Finally, to lighten her work still more, she was made a member of the library staff of Providence High School in Chicago, and she was on duty there when stricken with a sudden heart attack that ended her life on January 15, 1956.

Sister Carmella was a devoted teacher of biology who taught carefully and painstakingly. She was deeply interested in the physical and spiritual welfare of her students as well as in their intellectual and scientific growth. Among the Sisters of her Community she was recognized and highly regarded as a faithful and conscientious member of the Order, who had a generous and universal charity for all and being willing to help anyone in need.