The University of Chicago Faculty

A Centennial View

Frank Yoder

The University of Chicago Library 1991
Flyleaf: Albert A. Michelson addressing the seventh convocation, July 2, 1894.

Frontispiece: Faculty procession, 115th convocation, October 22, 1919.

Page viii: Faculty of the Geology, Geography, and Paleontology departments, 1912.

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This catalogue accompanies the first of a series of exhibitions in the Department of Special Collections marking the Centennial of the University of Chicago. Each of these exhibitions will present a view of the institution from a distinct perspective as it has grown and developed over the past one hundred years.

When the late Robert Rosenthal, Curator of Special Collections, and others began planning for "The University of Chicago Faculty" several years ago, it was understood that a general history of the entire body of scholars who have held faculty positions over the past century would be beyond the scope of a celebratory exhibition. Instead, attention turned to the selection of a number of individual faculty members who would represent others in the larger historical group. In making this selection, the goal was not only to examine the research careers of the University's foremost investigative scholars, but also to highlight the work of those best known for their dedicated and imaginative teaching, important contributions to literature and the arts, and critical leadership in administrative positions. A preliminary list of faculty candidates was prepared, each scholar identified being a recognized leader in an academic field, and of equal importance, a figure represented in the University Archives by manuscript and documentary material appropriate for exhibition.

In order to secure an outside evaluation, the names of prospective candidates were submitted to the Centennial Sub-Committee on University History. Members of the Sub-Committee reviewed the list, suggested possible additions, and offered advice on deletions which the limited exhibition space might make necessary. The Sub-Committee also stipulated that no living members of the faculty should be considered for inclusion.

A final group of twenty-eight faculty members was then selected. It is only stating the obvious to note that many more figures of equal stature could have been added if space in the exhibition gallery had permitted—Jacques Loeb, Leo Strauss, Maria Goeppert-Mayer, W. I. Thomas, Carl D. Buck, Edward Sapir, Lowell T. Cocheshall, R. S. Crane, and Leo Szilard were only a few of those suggested. Every reader familiar with the history of the University will no doubt be able to add to the list of nominations. Our hope, though, is that the present exhibition will provoke further thought and discussion and prove to be of interest to all who join in celebrating the University's one-hundredth anniversary.

Support for the Centennial exhibitions in Special Collections was provided by the Office of the President. Frank Yoder, a doctoral candidate in the Department of History, assumed responsibility for surveying archival collections and writing the text of "The University of Chicago Faculty." Kim Coventry directed the design and production of the exhibition and supervised the publication of the catalogue. Richard Popp offered useful suggestions during the development and editing of the text. It's also a pleasure to acknowledge the work of Jean M. O'Brien, who conducted the preliminary research for these exhibitions.

Daniel Meyer

*Acting Curator*

*Department of Special Collections*
Harper's University was its faculty. Like John D. Rockefeller, who often acknowledged his dependence on men of unusual intellectual strength and good will, Harper trusted accomplishment, encouraged individual achievement, and promised the support that he knew great scholarship required. Eschewing sectarian narrowness, he sought and obtained Rockefeller's approval for a broad approach to all knowledge; there would be no tests of doctrinal correctness at Chicago. "The question before us is how to become one in spirit, not necessarily in opinion," he told his new faculty at their first meeting on Saturday afternoon, October 1st, 1892.

Harper's two years of faculty recruiting had made him a national figure in the academic world, as well as the periodic subject of newspaper cartoons (one such drawing called the still embryonic university "Harper's Bazaar"). The association with Rockefeller's gifts, then the largest ever made to an institution, helped establish the thirty-five year old president-to-be as something of a managerial Svengali as he traversed the country in his effort to realize both Rockefeller's ambitions and his own.

Harper wanted stars. Utilizing not only the financial resources at his disposal but promises of libraries and laboratories as well as reduced teaching loads, Harper could compete with older private institutions and state institutions in providing support for the kind of scholarship to which he himself was committed. There were no traditions to restrict him, no trustees attached to their own image of an old institution, no governors or state legislators determined to look into what some of them considered a too generous gift of summer time and other vacations. Research was a new idea for many such people, and support for it questionable. Unencumbered by inherited restraints, Harper could establish a tradition of his own, one that has, for a century, been associated with the University of Chicago. It places research at the front of its image of itself and scholarship at the center of research.

Nor did Harper ignore younger scholars, whose presence on the faculty insured the continuing development of work of quality in all fields. Teaching loads for junior faculty were often heavy, but the opportunity to share research interests with a small but significant assembly of "greats" made Chicago the place to be, the center for new ideas to which teachers around the country would send their best students for graduate work and their best new PhDs for places on the junior faculty. It was also a good place from which to move to other institutions, and in the years before tenure assured faculty stability at the upper levels, that was an important consideration.

Rockefeller trusted Harper to manage the academic affairs of the new university. Not willing to be the sole source of support for Harper's ambitions, no matter how much he shared them, he pressed Harper to find other sources of funding from the local elite, some of it for construction of buildings, but also for the support of individual faculty members whose work the donor might find significant. The placing of the University in the Hyde Park-Kenwood neighborhood had a salutary effect on this pattern of fund-raising as faculty members married into wealthy local families. Harper's successful appeals to Chicago women's clubs and the city's Jewish community were brilliant steps, as was his ability to convince Mrs. Emmons Blaine to fund the bringing together of Francis W. Parker and John Dewey to form the Laboratory Schools of the University of Chicago.

Whatever the reason faculty members came to Chicago —
relatively higher salaries, the promise of free time for research and new research facilities, the opportunity to be part of a new educational venture, or the persuasiveness of Harper’s charismatic urgings — their impact on American education was immediate. Within the constraints placed upon them by budgets and administrative realities, the faculty at the University of Chicago responded to the challenge placed before them by Harper and quickly established their authority in a broad range of academic disciplines. Beginning a trend that continues today, most published prolifically and were recognized as leaders in their fields.

Contrary to mythology that has persisted, Harper did not reject undergraduate education, even if he did insulate many of his senior faculty from the responsibility of tending to it. His own experience and the example he continued to provide even from the President’s office had shown him the role that undergraduate education would have to play in the ongoing supply of the very scholars he himself was recruiting to the University. While it was obvious that all undergraduates would not enter the world of academia, the presence of sizeable graduate programs could not help but affect collegiate life at the University, as it indeed has continued to. Harper sought to establish a distinction between the first two years of college, which would be devoted to classical education, and the last two, which would move students into preprofessional or preacademic programs. One can see at least the shadow of the Hutchins College in Harper’s University.

As Harper acknowledged in his opening day remarks, the pursuit of knowledge might not lead to unity. Harper wanted productive faculty members committed to the full range of ideas in modern intellectual life. Supported by a solid financial base and remaining free of all close affiliation with either a religious body or a governmental agency, the University of Chicago faculty benefited from an unusual degree of freedom in teaching and publishing.

The University’s comparatively liberal policies also made it possible for the faculty and the administration to avoid some of the doctrinal battles that had characterized the development of sectarian schools and the ideological battles that were beginning to influence higher education. Harper’s fixation on uninhibited research and his reluctance to curb work in areas sensitive to the University’s public image fostered a spirit of independent inquiry. When Robert Herrick’s thinly disguised novels and plays criticized the Chicago elite who were important University supporters and caused concern among some who felt Herrick had stepped too far, Harper sent Herrick a note of praise and encouragement.

Thorstein Veblen’s Theory of the Leisure Class was an open critique of the spending habits of precisely the kind of people whose support Harper sought. Nor was Veblen alone in attracting attention. At a time when the debates over gold and silver were dividing economic, banking, business, and political communities, Chicago was not immune from conflict. Even Harper’s tolerance had its limits, although as in the case of Thorstein Veblen, it was usually a scholar’s personal life, not his ideas that most aroused Harper’s concern. It was not until after Harper had died that the new President, Harry Pratt Judson, asked for Veblen’s resignation.

By any standard, some of those included in this exhibition were difficult people. A few were eccentric, others simply had neither the time nor desire to develop the social graces required by general society but often considered unnecessary in an
academic setting. The University provided a stimulating environment in which thought and reflection were encouraged. While not all conventions were discarded, as Thorstein Veblen and a few others discovered, the level of tolerance was high. In most cases, those who thought deeply and clearly and articulated with precision survived and flourished.

Finding a common theme among the twenty-eight faculty members represented in this exhibition is an elusive quest. However, the scholars and careers outlined here reflect the historic patterns of strengths and diversity as they have developed within the University.

The natural sciences played an immediate and central role during the formative years, while the humanities developed somewhat more slowly, as they did throughout the country. The study of classical languages quickly became a strong field, as did philosophy. In the years before American literature had become a field and the idea of “modern” scarcely existed in an academic setting, Chicago's strength in early English literature made it one of the country's centers. The University became a leader in the study and production of dictionaries, including the reverse index of Greek and Latin nouns by Carl Darling Buck, two dictionaries of American English, and the major present-day project designed to produce a dictionary of Assyrian.

Although the arts received little attention, the social sciences matured rapidly as an interrelated group of disciplines. Law and medicine came later, and some dreams, such as a school of engineering, remained only dreams. In many respects, the outlines of these early trends can be discerned today as reflected in the strong emphasis on the natural and social sciences and the relatively less central position of the arts.

In other respects, the University has changed: medicine, business, and law have overcome early neglect and emerged as important, widely renowned professional schools. Other departments, such as anthropology and sociology, evolved from disciplines of collection, classification, and observation to assume a more critical, analytical role, an evolution that both paralleled and contributed to broader changes within academia. It is nonetheless the case that in both anthropology and sociology, the University provided major leadership, a trend which continues. The University was committed not only to the sin-

gling out of faculty of distinction but to the establishment of disciplines. The University had the first department of sociology and the first professor of sociology. It had the first department of political science that did not emerge out of a department of history or political economy, and the first department of geography.

From its earliest days, the spirit of intellectual inquiry was lively and robust. Teaching and other relationships between students and faculty took a variety of forms. Robert Herrick taught only sparingly, devoting most of his time to his writing. George Ellery Hale never gave a lecture and took on only the very brightest and most promising graduate students.

Others thrived on contact with their students. Robert Redfield carried on an extensive correspondence with his former students which sometimes lasted long after they left the University. Henry Cowles led field trips all over the United States and Canada, instilling in his students a love for nature and ecology. As evidence that fame, recognition as a research scientist, and excellence in teaching are not mutually exclusive categories, Enrico Fermi won the admiration of students and colleagues alike for
his ability to lecture and teach. A. J. Carlson turned physiology lectures into an effective performance theater that caught students’ attention. In spite of his heavy administrative load, William Rainey Harper relished the opportunity to teach and lecture and filled classrooms with students of Hebrew.

While some faculty members derived great satisfaction from their academic pursuits, others relished opportunities to become involved in matters beyond their own discipline. To varying degrees, social scientists actively engaged the larger society as a natural, and even essential, extension of their academic interests. Professors such as Edith Abbott and Charles Merriam saw their work as critical for understanding societal ills. Skilled in social analysis, they and other progressives who were their contemporaries promoted intervention to alleviate problems of poverty, corruption, and racism. Frank Knight seems to have gained as much satisfaction from his forays into the worlds of philosophy, ethics, and educational theory as he did from his work in economics. A proponent of what would today be called “conservative economics,” he lived through the interventionist years of the New Deal not knowing that his ideas would eventually find their way back into public policy.

John Dewey’s pioneering and influential work in education represented an outgrowth of his work in philosophy. Dewey’s colleague and friend, George Herbert Mead, supported the efforts of Jane Addams as treasurer of Hull House and served on Chicago educational committees. Marion Talbot fought to make education accessible to women and minorities during the administrations of three different University presidents. Franklin McLean organized fellowship programs to assist aspiring black medical students and was directly involved in efforts to provide medical care in the rapidly expanding black community near the University of Chicago.

Faculty served in both world wars, applying their expertise in fields like communications, propaganda, and languages in World War I and their research on nuclear physics in World War II. The University’s involvement in the Manhattan Project placed it in the forefront of both pathbreaking science and the moral and ethical dilemmas that soon followed. The careers and lives of Enrico Fermi and James Franck illustrate how scientists of different backgrounds faced this new and unfamiliar terrain. Having crossed the threshold of political involvement, faculty members encountered increasingly difficult questions. By 1968, University President Edward H. Levi noted that while support for freedom was stronger than before, the “propriety of the corporate neutrality of the university on public policy issues having moral aspects has been seriously challenged.”

The century we are celebrating has been a revolutionary one in the history of ideas. Much of what we know of the world has been reshaped, sometimes in disturbing ways. The University remains at the center of that change; but it is also responsible for the institutional stability that makes change possible and gives successive generations the courage to face it.

Harper’s University was its faculty. It still is.
While professor of Hebrew at the Baptist Union Theological Seminary in Morgan Park, Illinois, in 1881, William Rainey Harper inspired six students to spend eight hours each day of their Christmas vacation sight-reading Hebrew scriptures. If persuading students to study Hebrew was no small feat, convincing them to devote their vacation to it was an apt testament to Harper's teaching skill and charisma.

Harper's pedagogical gifts were legendary. E. Benjamin Andrews, under whom Harper taught at Denison University, recalled the young instructor's performance in the classroom:

Teaching was his delight... He looked forward to each class period as a feast....Before his class his mind and body also were all activity. His thought was instantaneous. Questions or correction followed answers like a flash....Bright students shot forward phenomenally; dull ones made good progress.

Although administrative duties would compete for the time Harper set aside for teaching at Chicago, he taught and wrote whenever possible. Believing strongly that administrators should not be exempt from teaching, Harper taught full time as chairman of his department and as president. Even while suffering from cancer during the final months of his life, Harper continued to meet large classes of students.

His appetite for work was equally legendary. In addition to his regular teaching duties at the Baptist seminary and later at Yale, Harper organized summer schools, sent out thousands of correspondence lessons, sponsored Hebrew clubs, lectured at Chautauqua, and edited journals of Hebrew studies. While at New Haven, where he taught just before coming back to Chicago, Harper's correspondence courses, summer schools, and Chautauqua work generated a greater
volume of mail at the local post office than did the rest of Yale University. By the time the University of Chicago opened, Harper's Correspondence School of the English Bible included a Christian Endeavor School of the English Bible, the College Student's School of the English Bible, the School of Hebrew and the Old Testament, the School of New Testament Greek, and a School of Semitic Languages and Ancient Versions.

The critical study of the Bible was central to Harper's vision of the new University. In the University of Chicago's first Official Bulletin, Harper wrote that "special courses in a scientific study of the Bible in its original languages and in its translation" would become a significant part of the proposed extension program.

Harper's mix of biblical and linguistic studies, instruction, and administration were vivid expressions of his compelling faith in the power of education. Standing firmly upon the liberal, progressive religious traditions of his time, Harper drew calm reassurance from his Christian beliefs while acknowledging the integrity of colleagues who could not accept them. Open to the critical examination of sacred tradition, he welcomed a diversity of religious opinion in the belief that knowledge would produce truth.
At the end of the nineteenth century, most scientists accepted the Laplacian theory that the earth was a body formed from hot gases and was steadily growing cooler. This theory was effectively challenged, not by astronomers peering into the heavens, but largely through the efforts of a geologist, Thomas Chrowder Chamberlin, who looked into the earth itself for his clues.

Leaving the presidency of the University of Wisconsin in 1892, Chamberlin came to Chicago to head the new university's Department of Geology and within a few years to establish the Walker Museum. He brought immediate recognition and prestige through his teaching and research, establishing and editing the *Journal of Geology* and contributing papers to it until late in life.

Early interests in glaciation and landforms led Chamberlin to broader questions. The clearly delineated cycles of glacial formation, growth, and retraction he identified contradicted prevailing notions of a gradually cooling earth. Seeking explanation, Chamberlin turned to an investigation of climatic change, focusing on changing levels of carbon dioxide in the atmosphere. His studies produced questions about the origins of the earth and the solar system itself. Chamberlin theorized that planetary growth occurred through the accretion of planetoidal parti-
icles and smaller bodies. A star passed so closely to the sun that material was torn from one or both of the bodies, producing the material floating through what is now the solar system. Chamberlin relied heavily on other scholars at the University for the specialized knowledge in mathematics and astronomy he needed to construct his theory. His colleague Forest R. Moulton, a brilliant mathematician, calculated the planetary forces at work. Astronomers at Yerkes Observatory, turning their telescopes on distant celestial objects, confirmed Chamberlin's theories and contributed to the collapse of the Laplacian hypothesis.

Chamberlin also challenged the work of Lord Kelvin, who had postulated that the earth was far younger than the billions of years claimed by geologists. Chamberlin attacked Kelvin's assumption that after only a few million years the earth would have become a frozen wasteland and went on to argue that atomic structures of an unknown type could conceivably form the basis for the energy derived from the sun.

Although Chamberlin made his own theoretical errors, his approach seldom varied. For him, the scientific method required that evidence never be accepted uncritically, that several hypotheses be tested at once, and that the investigator always maintain an open mind. Chamberlin viewed the natural world as an organic entity. While not religious in an orthodox sense, he found order and even a sense of purpose in the world he observed and studied. Subtle themes of growth, relationship, and direction recur throughout his work and thought.

“*A Course in Working Methods.*” Autumn Quarter, 1896.

Some of Chamberlin's students achieved eminence in their own right. J. Paul Goode, compiler of these notes from Chamberlin's course in methodology, made his reputation as a cartographer and author of the ubiquitous *Goode's Atlas.*
Charles O. Whitman maintained a single-minded commitment to original, specialized research. He disdained those who, he said, "flit from point to point, snatching a little here and a little there, learning a little of everything and not much of anything, aiming to amaze the vulgar with glib talk and profuse writing." Whitman's exacting standards and careful attention to detail brought him professional prominence, but they were also a stumbling block. Much of his work remained unpublished. After spending months investigating the eye of an eel, Whitman wrote: "The main feature of this eye has been known to me for two years, but it did not seem best to hasten the communication of the facts before giving the whole subject careful study."

Whitman also believed in open collaboration among scientists regardless of institutional affiliation. He found this goal best served in the Marine Biological Laboratory at Woods Hole, Massachusetts, which he directed for twenty years beginning in 1880. Scientists from various institutions worked side by side, offering one another advice and sharing data and theories. Despite being plagued by inadequate funding, the directors, often at Whitman's urging, rejected financial offers from larger institutions for fear that control


Although the University opened with a single, provisional Department of Biology, Whitman intended from the beginning to divide it as soon as possible into a group of departments reflecting the structure of biological research on the German model.
At the end of his career in Zoology, Whitman withdrew from administrative and teaching responsibilities at the University and at the Marine Biological Laboratory in Woods Hole. Until his death in 1910, he was absorbed in studying evolution and observing the behavior of pigeons he raised near his campus laboratory.

of the research program would be lost in the process.

The Marine Biological Laboratory served as a model for Whitman's work in Chicago as head professor of the Department of Zoology. Whitman's students at Chicago and Woods Hole were normally given ediate responsibility for research projects, regardless of their background or understanding. Whitman believed the best students would survive a "sink or swim" test. This approach also had the virtue of relieving him of tedious instructional and supervisory tasks.

Although Whitman disliked departmental administrative details, he seldom delegated authority. His impatience with undergraduates showed most clearly in his formal teaching, for he lectured only one hour per week and kept few, if any, office hours. Even graduate students found him elusive, for he did not always meet scheduled appointments. However, students who sought him out at his home often found him willing and happy to discuss their problems.

Whitman's contribution to the study of biology and zoology came from both his own research and from the influence achieved as the chief organizer of a field of study. Drawing upon his University of Leipzig training, Whitman used German approaches to research and teaching as a standard for his Chicago department. Supporting scientific research was expensive, and Whitman's demands on the University for funds, buildings, and staff were heavy. His arguments were made all the more compelling by reason of his eloquence and high level of commitment; biological research always remained his highest value.
With a promise of a working observatory and financial support from wealthy Chicago businessman William Ellery Hale, William Rainey Harper welcomed Hale's son, George Ellery Hale, to the University of Chicago as associate professor of astrophysics in 1892. Although Hale never earned a graduate degree, his work at MIT as an undergraduate had already gained him prominence in the emerging field of astrophysics.

Hale played a pioneering role in the new astronomy that advanced beyond the identification and plotting of stars. By applying developing understandings of light and motion to an analysis of stars, the chemical and physical characteristics of even distant stars could be understood. Of particular interest to Hale was the closest star — the sun.

While riding a streetcar in Chicago in 1889, an idea came to Hale "out of the blue" that made photographing the sun's prominences possible. By 1891, he was obtaining important results with his new spectroheliograph at the Kenwood Observatory set up in the backyard of the family home at 4545 South Drexel Avenue.

When George Hale joined the faculty at the University of Chicago, he was given no teaching or administrative duties and focused his energy on planning the new observatory at Williams Bay along Lake Geneva, Wisconsin. Opened in 1897, the Charles T. Yerkes Observatory represented the best quality of both scientists and equipment to be found anywhere. The observatory's forty-inch telescope provided extraordinary viewing opportunities for measuring stellar parallaxes and for making direct comparisons of star positions.

With the promise of a sixty-inch reflector lens to be contributed by his father, Hale urged the University in 1896 to provide a mounting for the lens. When his efforts failed, the newly formed Carnegie Institution met Hale's request and offered him an escape from the budgetary restraints he had encountered at Chicago. Hale resigned from the University of Chicago in 1905 to devote his time to the Mt. Wilson Solar Observatory near Pasadena he
had founded the year before. By 1908, the Mt. Wilson sixty-inch telescope, the largest in the world, was operational.

Hale was blessed with many advantages: his father’s wealth freed him from many of the personal financial constraints which checked other scientists, and his career coincided with the growth of modern science. But it was Hale’s ambitious research agenda and his curiosity that were most notable. He was not only a superb astrophysicist, he was a master creator of institutions within which scientists could do their work.

Forty-inch telescope, Yerkes Observatory.

Four inches wider than the Lick telescope on Mt. Hamilton in California, the light-gathering capabilities of the Yerkes instrument allowed Hale and his colleagues to see farther and in greater detail than anyone ever had before. Hale attached his newly designed Rumford spectrohelioscope to the telescope and used it to investigate the sun’s internal characteristics. Hale was also the first to photograph low temperature red stars known as Secchi’s fourth type.
ne of the most important commitments made by the founders of the University of Chicago was to equal educational opportunities for men and women at the new institution. Marion Talbot, head of the Department of Household Administration and Dean of Women, constantly reminded the three presidents under whom she served of that pledge.

Marion Talbot held firm convictions about education and the role of women in education. One of only a handful of women in American university administration, she advised female students at the University of Chicago to take full advantage of their academic opportunities. Always concerned about the distracting temptations of campus life, she urged women to limit their involvement in extracurricular activities and cultivate a strong sense of culture. In assuming a new role in society, women needed both personal self-confidence and the best professional education. Marion Talbot expected the University of Chicago to provide these in an environment in which they could be enhanced and developed.

Although Talbot advocated a continuing role for women in the home, her views were not
traditional. Borrowing from progressive models of efficiency and scientific management and exploiting the new technology appearing at the time, modern women had the domestic tools to escape the drudgery of the past. Marion Talbot taught that a home could be “administered” in an effective way without compromising its vital role as a cultural hearth.

Crucial to this view was access to academic opportunity. When the University appeared to renge on its early promises of equal education by promoting sexually segregated instruction at the turn of the century, Talbot challenged the administration to abandon its plan. Later, she pointed out the inequity of preponderently male faculty appointments and the overwhelming focus on men in University events, eloquently and precisely identifying the problem and leaving no doubt as to a solution. Despite her reputation as an advocate for women, Talbot argued that equality should mean simply that and nothing else. She expected no more and no less than anyone else received. Her courses in household administration were specifically open to both men and women, and she criticized decisions that she felt patronized any specific group. Marion Talbot asked only that everyone be given equal opportunities, a goal she vigorously pursued.

Marion Talbot to William R. Harper, November 9, 1904.

Talbot’s inclusive view of society emphasized equal opportunity rather than differential treatment of men and women. When it was suggested that women faculty members escort Jane Addams to the platform to deliver a convocation address, Talbot was quick to express her disapproval.
A director of Physical Culture and Athletics at the University of Chicago during its first forty-one years, Amos Alonzo Stagg helped establish the University as a center of both collegiate and amateur sports. A staunch believer in amateur athletics, Stagg was responsible for all athletic programs at the University, from baseball and track to basketball, football, and gymnastics. In an era when the lines between coaching and playing sometimes blurred, Stagg in the early years sometimes found himself in the role of an athlete, as when he pitched for Chicago’s baseball team for an entire season after the only other pitcher’s wildness proved irreversible.

A star football and baseball player at Yale, Stagg quickly gained a favorable reputation in the growing arena of intercollegiate amateur athletics. While coaching teams at the YMCA College in Springfield, Massachusetts, Stagg forged a bond between sports and religious faith that remained important to him for the rest of his life. Asked by William Rainey Harper in 1890 to head the Department of Physical Culture and Athletics, Stagg was quickly reassured about the role of sports in the coming university. Harper promised Stagg that the teams under his direction at the University of Chicago would be sent around the country to “knock out all the colleges.”

While at Chicago, Stagg oversaw creation of several athletic facilities, supervising details of Bartlett Gymnasium’s construction to tailor the building to his and the University’s needs. Gridiron success brought increased weekend football crowds and resulted in the erection of Stagg Field, a stadium named in his honor.

Stagg-coached teams gained national fame. University of Chicago football teams dominated the Big Ten conference through the mid-twenties, winning seven titles by 1924. Football was not the only sport at Chicago, however. University tennis, track, and baseball teams, though less well-known, all fell under Stagg’s control.

During his long tenure at the University of Chicago, Stagg demonstrated a deep concern for much more than just the physical achievements of his athletes. Athletics and winning were only two aspects of a philosophy that integrated the physical, mental, and spiritual dimensions of life.

For Stagg, every act reflected on the individual actor. He believed that lives could be shaped positively by proper surroundings and influences. His religious beliefs went deeper than most; for Stagg, being “spiritually ready” was as essential for the successful athlete as physical preparedness.
Already a preeminent scientist when he came to Chicago from Clark University in 1892, Albert A. Michelson gave the University immediate distinction in the physical sciences. Michelson had established himself quickly in the scientific world at the age of twenty-seven when his experiments measuring the speed of light gained worldwide attention. Over the years, he continued to refine these measurements. His last dictation, shortly before he died in 1931, was entitled “Measurement of the Velocity of Light in a Partial Vacuum.” His careful techniques won the confidence of his contemporaries, and in 1907 he was awarded a Nobel prize in physics for his pioneering efforts in measuring and analyzing light, the first Nobel prize in science awarded to an American.

The founder of the Department of Physics at the University of Chicago, Michelson supervised every detail of laboratory construction, faculty appointments, and equipment specifications. As the years passed, his patience with graduate students wore thin. In 1908, he asked Robert Millikan to supervise thesis preparation, explaining that students were either unable to handle problems as he wanted or “they get good results and at once begin to think the problem is theirs instead of mine.”

A master at the art of measurement, Michelson devised experiments noted for their simplicity. Thus measurements of the
velocity of light used a rapidly rotating, multifaceted mirror to reflect a beam of light. When the speed was correctly adjusted, light reflected from the rotating mirror struck a mirror held in a fixed position and returned to strike the next face on the spinning mirror. The time needed for the next face to rotate into position to precisely reflect the light was the time required for the light to travel the known distance to the stationary mirror and back. His earliest attempts, made with materials costing barely ten dollars, measured the speed of light at 186,508 miles per second, or within two hundred miles of the actual value.

Michelson’s ability as a theoretician was matched by his skill as a technician. Michelson was a working scientist, at home with the machinists, the lens polishers, and the “mechanician” who built the machines and instruments he designed. In an age when theory was tested by physical observation of phenomena, he had a dual ability to understand complex problems and then devise and conduct the necessary experiments.

Trained long before Newtonian physics were undermined by Einstein’s theory of relativity, Michelson believed that one component of light was the “ether” through which it traveled. His failed attempts to find evidence of its existence had the effect of helping substantiate Einstein’s theories. Other advances in physics have long since made Michelson’s techniques obsolete, but his serene dedication to pursuing scientific truth and his unwillingness to settle for anything less than precision remain his most telling legacy.
More eyes are now fixed upon the University Elementary School at Chicago than upon any other elementary school in the country and probably in the world.

Dr. A. B. Hinsdale, 1900
National Council of Education

By the turn of the century, John Dewey’s experiment in education had captured the attention of teachers at every level of the teaching system. Its radically new teaching practices represented a turning point, not only for formal education but also for larger views of childhood learning.

Dewey came to the University of Chicago at the urging of James Hayden Tufts, a colleague at the University of Michigan who joined the Chicago faculty in 1892. Appointed to head the Department of Philosophy, Dewey’s experimentalism blended well with the views of George Herbert Mead and Tufts. In addition to fulfilling his departmental obligations and administering the School of Education, Dewey published several books and articles on education and philosophy. *The School and Society* (1899) became a classic among progressive educators.

Trained as a philosopher at Johns Hopkins, Dewey was intrigued by the relationship between the individual and society. Firmly committed to a democratic outlook, he considered the school a laboratory to test his notion that education could integrate learning with experience. The University
Elementary School or Laboratory School established by Dewey grew quickly. Parents were attracted by a curriculum that emphasized the child instead of the subject matter, where the learning process was at least as important as what was learned, and where curiosity was encouraged.

Dewey's success could not overcome his disagreements with administrators and other educators. His relationship with William Rainey Harper deteriorated as Harper's plans to consolidate the Elementary School with Colonel Francis Parker's Chicago Institute under the control of the University infringed on Dewey's freedom of action. Dewey assumed that he would be given control of the curriculum and the merged school administration, leaving the funding problems in the hands of the University. This was clearly not Harper's view, and when controversy arose over the appointment of Alice Dewey as principal of the University Elementary School, John and Alice Dewey resigned and left for Columbia University.

Dewey's interest in education shifted after leaving Chicago and he never again organized a school. For the next half century he concentrated upon philosophical issues, publishing extensively and with great influence upon political, aesthetic, ethical, and epistemological questions. He clung to his liberal humanism, eloquently defending democratic ideals during periods when world and national events seemed to undermine the basis for his beliefs.
As unconventional in his personal life as in his academic career, Thorstein Veblen always seemed to stand outside of his social and intellectual environment. In 1906, after fourteen years at the University of Chicago, some of which he had spent as a research fellow and instructor, he had risen only to the rank of assistant professor. Yet it was during these same years that he made many of the probing observations of American life which have brought him enduring attention.

Veblen was one of the first academics to examine seriously the relationship between consumption and wealth in society. Although he trained and worked as an economist, he incorporated sociological and anthropological research into his own work. His classic work, *The Theory of the Leisure Class* (1899), written at Chicago, dissected the behavior of the wealthy in an increasingly materialistic world, coining the phrases conspicuous consumption, pecuniary emulation, and conspicuous waste. The book’s effectiveness was enhanced by Veblen’s seemingly dispassionate and impersonal style. In fact it was a savage and frequently ironic if extremely erudite assault on current values. John Kenneth Galbraith has called it one of only two books by nineteenth-century economists that is still read.

The leisure class was not the only group Veblen singled out for critical description. His years at Chicago and later at Stanford provided him with the material for a critique of modern higher education. *The Higher Learning in America* (1919) was Veblen’s interpretation of all that had gone wrong with the colleges and universities. Veblen argued that the application of business standards to measure the success or failure of academic inquiry was
smothering higher education and turning universities into little more than advanced technical schools. Sales of Veblen’s books were modest at best, and academic reactions were not always favorable. Even his most famous work, *The Theory of the Leisure Class*, was not reviewed by the *Economic Journal* until twenty-six years after it first appeared. One analyst said he wrote “with one eye fixed on the squirming reader.” Although his personal correspondence gives no hint of his sardonic cynicism, his published writings reflect a man uncomfortable with the existing social order. At least a few of his contemporaries recognized his brilliance and, despite their ideological differences, supported him when he ran afoul of societal and academic conventions.

Perhaps deliberately, Veblen developed teaching techniques that frustrated students and administrators. Students in his courses were required not only to read French and German fluently, but to be conversant in a wide range of disciplines in order to register. After hearing him lecture in a barely audible monotone, most students quickly dropped his courses. Those who remained were generally all given C’s, not a happy prospect for potential Phi Beta Kappas. When a scholarship committee asked Veblen why his was the only low grade on one applicant’s transcript, Veblen replied that his grades were “like lightning, liable to strike anywhere.”

Thorstein Veblen to Sarah McLean Hardy, January 18, 1896.

*The Theory of the Leisure Class* was as difficult for its author to write as it was for some of his readers to accept. Three years before the book saw print, Veblen confessed to Sarah Hardy that he was unsure it would ever be published.
James Henry Breasted was one of the most widely known members of the University of Chicago faculty, a popularizer and textbook writer as well as America's first teacher of Egyptology. His field of work also captured the attention of religious-minded philanthropists like John D. Rockefeller, Jr., who were intent upon learning more about the ancient Near East. Working when serious professional archaeology was in its infancy and unconstrained by many governmental restrictions, Breasted's discoveries and purchases of artifacts helped shape the American image of past civilizations. His travels in the Near East evoked romantic images of Arab sheiks, ancient lost cities, tribal warfare, and buried treasure of the sort discovered at the tomb of Tutankhamun. In the years before oil irrevocably changed Western perceptions of the ancient Fertile Crescent, few adventures stimulated popular expectations more than Breasted's archaeological explorations.

Trained in Egyptian, Greek, Hebrew, and Arabic at Yale under William Rainey Harper, and in Berlin, Breasted’s interest in ancient cultures drew him first to Egypt and then to Mesopotamia. Ancient Records of Egypt, published in 1906, was a five-volume work that contained his English translation of the most important Egyptian historical texts held in Europe at that time. In addition, he conducted a pioneering epigraphic survey in Egypt during two seasons, 1905-6 and 1906-7. With the help of a photographer and an assistant, he set about recording as much as he could of the tombs and temples along the banks of the Nile. This work is recognized today as crucial to the understanding of ancient Egyptian history and culture.

Arranging for an expedition halfway around the world in 1900 was no small task. Dealing with balky porters, negotiating with foreign bureaucrats whose demands and authority were often vague, overcoming problems of weather and terrain, and surmounting the logistical difficulties of reaching inaccessible locations were some of the problems Breasted confronted on a routine basis. While in the field, he was constantly faced with shortages of funds and problems from home. To be sure, he was not helpless. Aware of the popular interest in his work, Breasted was not averse to turning the lure of buried tombs and lost cities to his advantage. Going directly to potential donors, often without consulting University administrators, his fundraising activities were a constant point of contention. Frequently successful, if not always well loved, Breasted managed to raise the necessary funds to support his overseas expeditions as well as to help underwrite the University’s Near Eastern programs on campus. Today's Oriental Institute evidences his persistence and enthusiasm and the interest he was able to cultivate in others.

James and Frances Breasted and son Charles, Temple of Amada, Nubia, Upper Egypt, 1906. Frances Hart and James Breasted were married in Germany shortly after he completed his doctoral work at the University of Berlin. The Breasteds explored the Nile on their honeymoon and returned together with their son in 1906. Frances endured frequent and lengthy separations from her husband and tolerated his intense preoccupation with his work.
In his time a prolific and influential novelist, Robert Herrick was a professor of English and rhetoric at the University of Chicago from its inception until he resigned in 1925. Coming to Chicago from MIT at the urging of William Rainey Harper, Herrick anticipated an exciting intellectual environment, but his experience proved to be bittersweet. Personal and family problems, combined with a dislike for the Midwest and the city of Chicago, produced almost immediate dissatisfaction and periodic despair.

While Herrick often chafed under his teaching obligations, he benefited from the University’s intellectual ferment and the unusual freedom from teaching responsibilities that Harper had provided him. During his tenure at Chicago, Herrick produced thirteen novels, spending lengthy periods of time in Europe and in the East while he wrote.

Part of a rising generation of American realists, Herrick’s works dramatized contemporary social questions. His novels and plays were often thinly disguised autobiographical accounts of life in Chicago and elsewhere. If Herrick was a controversial man, it was not only because he criticized important Chicagoans, but also because he drew attention to the evils of industrialism and to the darker side of human life. His book, *The Common Lot* (1904), was a fictionalized account of his own unhappy experiences while building a house on University Avenue. Architects and builders appear as incompetent money grubbers, eager to exploit an unsuspecting public. In *Chimes* (1926), Herrick settled his score with the University, explaining its birth as the coming together of new wealth and an energetic but uncultured president. The streets of mud and the primitive urban frontier setting of the young University that *Chimes* described had many elements of truth, but even Herrick’s close friends criticized his harsh caricature of Harper.

Not a particularly happy man, Herrick’s personal and professional life was often in turmoil. In an autobiographical note titled “In Search of One’s Soul,” Herrick described his personal pilgrimage.

*The image of man toiling up desolate windswept heights, with some unknown destination, unrealized aim. As the*
journey progresses the scene has grown wilder, sterner, more desolate, less distracting, less peopled, and less cumbered...[II]e is more and more definitely conscious that his pursuit is necessary, inevitable, and that its sole consolation is that at each stage he finds himself strong enough to rise and resume the toilsome way, without enthusiasm or emotional delight, perceiving more clearly that the road will be increasingly lonely, severe, and the end — defeat.... The reward? Somewhere, somehow, around some dark, forbidding cliff he will come face to face with himself, entire, complete.

Despite being counseled against it, Herrick resigned abruptly from the University in 1923. He never forgave the University for refusing to pay him what he regarded as an adequate and justly earned pension. It was during the last years of his life as governor of the Virgin Islands that Herrick unexpectedly achieved a measure of both personal satisfaction and wider recognition for his abilities as a capable administrator.

Robert Herrick, "Love."
manuscript notebook. 1916.

Seldom hesitating to write what he thought, Herrick produced novels that many considered licentious. His work was not only controversial; as the entries from this notebook make clear, much of it drew heavily on his own experience and observation.
George Herbert Mead
1863-1931

Like many of his colleagues at the University of Chicago, George Herbert Mead ranged widely in his intellectual interests. Unlike them, however, he published infrequently, restrained by what his friend John Dewey labeled "a certain diffidence" or by what Mead himself more plainly termed "my inability to write what I want." Still, Mead exerted a wide influence. Regarded highly by philosophers in his own lifetime, his work has more recently attracted the sympathetic attention of scholars in other fields.

Raised in a conventional Christian home, Mead struggled during his years at Oberlin and Harvard with a loss of certainty as fundamental doubts about religion in general and Christianity in particular produced a personal spiritual crisis. He drifted in and out of a variety of occupations before settling at Harvard to study with Josiah Royce. There, Mead grew dissatisfied with the dominant speculative approach and its failure to engage the scientific and social problems that concerned him. Seeking a more realistically grounded philosophy, he left Harvard, eventually writing a dissertation at the University of Berlin. While in Germany, he not only studied philosophy, but also observed firsthand the growing Social-Democratic Labor movement, an experience that encouraged Mead's later involvement in American social reform.

Mead accepted a position at the University of Michigan in 1891 and struck up a friendship with another young philosophy professor — John Dewey. When William Rainey Harper invited Dewey to Chicago in 1894, one of the conditions Dewey laid down before accepting was that George Mead be given a position as well. Mead took the post offered to him and began a nearly forty-year career as a philosopher at Chicago.

Mead's philosophical approach grew out of his conviction that knowledge was not remotely removed from the immediate experiences of everyday life. The quest to integrate knowledge
and experience became the hallmark of philosophy at the University of Chicago.

While at Chicago, Mead participated actively in a variety of local movements and social programs in the growing city. He was treasurer of Hull House, a member of the progressive City Club, and editor of the *Elementary School Teacher*.

When Robert Maynard Hutchins attempted to appoint Mortimer Adler to the philosophy department in 1951, Mead and four other philosophers created a nationwide stir when they resigned from the University. Convinced that Adler’s appointment and his neo-Thomist approach represented a disturbing political and philosophical shift within the University of Chicago, an embittered Mead accepted a post at Columbia University. He died unexpectedly a few months later and never filled the new position.

After Mead’s death, his son and daughter-in-law, Henry and Irene Tufts Mead, oversaw the compilation of unpublished manuscripts, lecture notes, and student notes. Published posthumously as a three-volume set, these books, *Mind, Self and Society* (1954), *Movements of Thought in the Nineteenth Century* (1956), and *The Philosophy of the Act* (1958), along with an edited version of his Carus lectures, *The Philosophy of the Present* (1952), form the main corpus of Mead’s philosophical writings, which have had a distinctive influence upon recent American social science.

George Herbert Mead, "What Social Objects Must Psychology Presuppose," manuscript, 1909.

Mead argued that the value of behavioral psychology was limited because it viewed humans as purely instinctual and reflexive beings. By ignoring the social dimension of human interaction, behaviorists had eliminated a critical factor in understanding the cognitive process.
During his twenty-five years as its dean, Shailer Mathews placed the indelible imprint of liberal Christian thought on the University of Chicago Divinity School. Mathews was one of the country's most visible and articulate advocates for making social concerns an essential part of the Gospel message. His insistence upon subjecting Biblical texts to objective scientific scrutiny, free from the assumptions of conservative Christianity, placed him at the center of the emerging debate between liberal Christianity and the new fundamentalism. His books remain today as powerful examples of Social Gospel and modernist thought.

Not only were Mathews and William Rainey Harper close friends, they shared similar visions of religion and beliefs in the progressive nature of human affairs. Harper brought Mathews to Chicago from Colby College as part of his plan to place religious studies on equal footing with other academic inquiries. Even though the University, in its early years, maintained loose ties to Baptist institutions, the Divinity School operated without denominational constraints. Theologically, Mathews stood to the left of most orthodox Protestant theologians. When asked if God was a person, he replied, "Conceptually, he is a person; metaphysically we must be agnostic on this." While he was open-minded and tolerant of other views, Mathews drew the line at the ideas of the new fundamentalists. His modernism came under increasing attack.
during the early twentieth century, not only from fundamentalists but from a resurgence of neo-orthodoxy.

Mathews openly embraced the role of scientific inquiry and argued that religion had nothing to fear from advances in science. “We hope to make the technique of religion as intelligible as arithmetic,” he once wrote, “to learn what God means to man, man to God. We take nothing for granted.” Because he saw religion and science addressing distinctly different questions, he avoided the perplexity afflicting so many when scientific findings contradicted Biblical history. As indicated by the title of one of his books, *The Contributions of Science to Religion*, he easily incorporated evolutionary theory into his religious views, arguing that the Bible did not exclude evolutionary possibilities.

His belief in higher criticism and the contextual analysis of biblical texts was attacked by literalists who claimed that Mathews had rejected the very essence of the Christian faith. Unintimidated by such controversy, Mathews engaged all comers in a lively and pointed debate over issues of interpretation, doctrine, and implementation of the Gospel. His ultimate concern lay with the present and not the hereafter. In what may have been Bond Chapel’s shortest sermon, Mathews said of the afterlife: “What worries me is not if I shall have immortality, but if I have it, what I’ll do with it. Shall we pray?”

Shailer Mathews, “Fundamentalism vs. Modernism,” manuscript.

Mathews met the rising tide of fundamentalism head-on. While he clearly understood many of the reasons for its popularity, he was not prepared to yield any of his liberal convictions. “If the Kingdom of God is ever to be on the earth,” he wrote in these notes, “society itself must be transformed.”
From his days as a graduate student at the University of Chicago until his retirement in 1934, Henry Chandler Cowles pioneered the field of ecology as a discipline within the natural sciences. Unlike many botanists who ignored factors of change in their work, Cowles understood the landscape to be naturally changing and evolving. Today, amid growing concerns about our environment, the ecological sensitivities fostered by scholars like Cowles carry increasing importance.

His dissertation, “An Ecological Study of the Sand Dune Flora of Northern Indiana” (1898), opened a new field of inquiry. Largely a science of classification during much of the nineteenth century, botanical research was just being transformed into a study of theoretical relationships between plants and other natural life. Cowles’s concern with temporality helped establish ecology as the investigation of a changing, natural environment, defining patterns of transformation over time as plant communities succeed one another.

Cowles published relatively little. His doctoral dissertation and a few articles written early in his career formed the bulk of his research publications. He exerted a substantial influence on his students, however, as the leader of countless field trips. As these small groups cooked, hiked, and camped together, sometimes for extended periods, Cowles was able to generate an interest in botany and an uncommon rapport. It was here that Cowles had his most profound impact on the study of ecology. His students often published far more than he ever did, but it was Cowles, the effective teacher, who helped lay the foundation for their lifelong interest in ecological studies.

Cowles was most fascinated by the Indiana Dunes, and he returned there repeatedly, both as a scholar and as a citizen seeking to preserve this important ecological laboratory. Moving dunes, receding tree lines, and wetland areas provided an endlessly changing panorama. Always seeking a new perspective, Cowles often traveled to the dunes on one rail line and...
returned on another to take advantage of a different view.

His involvement in local and state conservation efforts was crucial in the formation of public preserves such as the Cook County forest preserves. The creation of Starved Rock State Park and the preservation of a white pine stand in Ogle County were two other campaigns in which Cowles played a key role. His influential interest helped save the dunes in Indiana from destruction, leading eventually to the creation of a state park and, some thirty years after his death, to the establishment of a national lakeshore. Although Cowles stood together with many other conservation leaders, his foresight, knowledge, and enthusiasm helped to galvanize public action in an era when natural resources still seemed nearly limitless.

Henry C. Cowles (center) with visiting European botanists. Cowles relished the company of fellow scientists who were engaged in research on common problems. With notebook and camera always close at hand, few social occasions or natural phenomena went unrecorded.
The career of Charles Merriam spanned a transitional period as the states became a nation and the nation became an international power. He was part of the generation that came of age during the Progressive period only to face the crises of both World Wars and the Great Depression. Although he was never blind to the challenge these events posed for the liberal commitment to democracy, Charles Merriam maintained his belief that industrialization and science would enhance rather than destroy the role of citizen participation in public affairs.

During his years as a political science professor at the University of Chicago, Merriam actively participated in the political process that was the focus of his academic research. Merriam believed that at some point theories of political process needed to be linked to practical political activity.

Although University administrators were not uniformly enthusiastic about Merriam's political involvements, he nonetheless plunged into the local electoral fray. His work as alderman and on several commissions for the City of Chicago spanned almost two decades, earning him a solid reputation.
Herbert Hoover appointed him to serve on the Research Committee on Social Trends, and he later served on the National Resources Planning Board under Franklin D. Roosevelt. His service under Roosevelt during the Great Depression brought him as close as he ever came to realizing his goals of progressive social intervention and change.

As a political scientist, Merriam was intrigued by the methodology he saw emerging in the fields of philosophy, sociology, psychology, and anthropology. Merriam hoped to steer political theory along a path that incorporated these methods but that resisted their deterministic tendencies. Often called the father of the behavioral movement in political science, he made the department at Chicago the nation's leader in the production of more than a generation of major figures in the field.

Merriam's deep involvement in philanthropic organizations, his teaching and writing, and his work in creating the Social Science Research Council and the Public Administration Clearing House exemplified his belief in the need for new organizations for systematic reform. By utilizing systematic and objective analytical methods, Merriam was convinced that the political process could be used to improve the quality of life. Improvements in science and technology were mass gains, as he often put it, and needed to benefit all people.

Harry L. Hopkins to Charles E. Merriam, telegram, December 9, 1933.

Acknowledged as an authority on American social and political issues, Merriam played a key role in bringing academic expertise to bear on government policy.
In 1924, John Matthews Manly proposed a systematic study of the complete works of Geoffrey Chaucer, anticipating that the work "would necessarily require several years." Although the "several years" were to become sixteen, Manly and his collaborator, Edith Rickert, produced the eight-volume edition of *The Text of the Canterbury Tales* (1940) that was immediately hailed as the defining work in the field of Chaucerian studies.

Both Manly and Rickert brought a great deal of linguistic and cryptographic experience to the Chaucer project. During the First World War, Manly worked for the War Department on a decoding project that broke German codes and devised codes for the Allies. Aware of Edith Rickert's expertise as a student of language, Manly brought her to Washington to assist in the work. After the war, Manly returned to Chicago, and Rickert joined the English Department in 1924. From that time on, their lives centered on teaching and Geoffrey Chaucer.

By all measures, the Chaucer project was a monumental
undertaking of scholarship, critical analysis, and data collection. Manly and Rickert's goal—to establish an authoritative text of the *Canterbury Tales*—involved collecting, photographing, and collating all existing Chaucer manuscripts and studying their provenance. A Chaucer textual laboratory was organized in Wieboldt Hall where a team of graduate students meticulously analyzed photostatic copies of the eighty-three fragments and complete manuscripts of the *Tales* found by Manly and Rickert. Lettering styles, paper markings, and types of ink were examined to find clues that might help establish each manuscript's origin.

During six months of each year, Manly and Rickert traveled to Britain and the Continent to examine original manuscripts held in museums and private collections. Here they looked for minute details such as ink changes, erasures, binding, and trimming techniques that might have escaped the camera's eye. As they worked, the project grew from a simple study of the manuscripts to one that encompassed a study of Chaucer's life and the times in which he lived. Manly and Rickert combed archives in England for traces of Chaucer's family and for any information that contributed to a more complete understanding of English culture in the fourteenth and fifteenth centuries.

Eventually, the Chaucer Project became a race against time, exhaustion, and depleted finances. Edith Rickert once said that if they worked like ordinary human beings, the work would never be completed. Funding problems were exacerbated by the Depression, and both Rickert and Manly suffered from physical exhaustion. For Rickert, the problems of ill health brought on by overwork prevented her from seeing the finished work. She died a few months before the first volume was published. For Manly, the Chaucer Project exacted a heavy toll as well, and he lived only long enough to see the written volumes in print.
Robert E. Park
1864-1944

Robert Park began his career as a reporter for newspapers in Minneapolis, Detroit, Denver, New York, and Chicago, an encounter with journalism that influenced his later work in sociology. Park believed that a sociologist was “a kind of super-reporter, like the men who write for Fortune...reporting on the long-term trends which record what is actually going on rather than what, on the surface, merely seems to be going on.”

As an undergraduate at Michigan, Park studied under John Dewey, who introduced him to Franklin Ford. Park and Ford planned a newspaper, The Thought News, as an effort to record public opinion much like a business paper recorded fluctuations in the stock market. The idea never came to fruition, but it clearly anticipated later events. After his sojourn into reporting, Park studied in Heidelberg with Georg Simmel, earning his PhD in 1904.

Park’s work among Africans and African-Americans, first as a muckraking journalist who exposed King Leopold’s exploitation of the people of the Belgian Congo and later as an aide to Booker T. Washington at the Tuskegee Institute, remained an important part of his life as a teacher and researcher at Chicago. Park felt he was observing “the historical process by which civilization, not merely here but elsewhere, has evolved, drawing into the circle of its influence an ever widening circle of races and peoples.”

Coming to Chicago in 1914 in the Department of Sociology and Anthropology, Park acquired an ideal laboratory to study the phenomenon of collective behavior and interaction. Chicago, like any great city, was civilization compressed into a small geographical area but with its diversity left intact. Park wrote:

The city is a state of mind, a body of customs and traditions, and of organized attitudes and sentiments that inhere in this tradition. The city is not, in other words, merely a physical
mechanism and an artificial construction. It is involved in the vital processes of the people who compose it, it is a product of nature and particularly of human nature.

To Park, individual self-concepts, goals, and status all contributed to the various forms of society, forms Park believed could be understood in social scientific terms. He was instrumental in drawing sociology away from a normative and often overtly prescriptive analysis of society toward a more objective methodology. This did not, however, lead Park to advocate abandoning earlier efforts to actively intervene and reform society, and he himself participated in such efforts. To avoid the prescriptive approach he criticized in others, he emphasized “the conception of the relativity of the moral order” that was implicit in the work of John Dewey and George Herbert Mead.

The Chicago School of Sociology grew to prominence under Park. Along with Ernest Burgess and Louis Wirth, Park created a theoretical basis for a systematic study of society. His effectiveness as a teacher was demonstrated by the list of notable scholars who studied under him, including E. Franklin Frazier, Charles S. Johnson, Edgar T. Thompson, W. O. Brown, Louis Wirth, Everett C. Hughes, and Helen MacGill Hughes.

Human ecology was a phrase Park coined, borrowing concepts of symbiosis, invasion, succession, dominance, gradients of growth, superordination, and subordination from the science of natural ecology. Such concepts of interaction and dynamic mobility in society were useful in redirecting sociology from reform to scientific analysis without denying the social importance of knowledge.

The career of William E. Dodd, professor and chairman of the Department of History, marked an unusual intersection between scholarship and the world of public policy. A native of North Carolina who had received his professional training at the University of Leipzig, Dodd championed the cause of Jeffersonian liberalism in the classroom, on the lecture platform, and later in his life in diplomatic chambers as the American ambassador to Nazi Germany.

Dodd's philosophy of history was rooted in the South of his youth. Coming to the University of Chicago after several years of teaching in Virginia, Dodd made his courses and seminars a significant center for the study of Southern history. In articles, books, and speeches, Dodd brought the economic perspectives of the “New History” to bear on the South and the Civil War, arguing that the Southern planter elite had been responsible for the catastrophe of war and the destruction of the culture of the Old South. One of the first historians to examine the South from a modern perspective, Dodd also trained an important group of graduate students, Frank L. Owsley and Avery O. Craven among them, who were to form a new generation of Southern historians.

As a supporter of Woodrow Wilson in 1912 and an advisor to the Wilson administration in planning the post-World War I peace conference, Dodd became involved in the highest levels of national and international policy. It was Dodd’s contacts with Wilson’s inner circle that brought

William E. Dodd to Bessie L. Pierce, August 20, 1934.
Writing from the American embassy in Berlin, Dodd argued that the Depression posed the same political dangers as those confronted by Andrew Jackson in his battle with Nicholas Biddle’s Bank of the United States a century earlier.
him to the attention of Franklin D. Roosevelt and persuaded the president to name him the American ambassador to Nazi Germany in 1933. Roosevelt clearly hoped that Dodd’s German academic degree and scholarly credentials would serve as a moderating influence on the Hitler regime, which had seized power only five months before. For Dodd, however, the appointment was an unparalleled opportunity to fulfill the Wilsonian ideal of international cooperation.

Dodd’s ambassadorial appointment caught many observers by surprise. As Max Lerner wrote:

*If the record of our times were not so keyed to the tragic, it might be read as first-rate ironic comedy. Here was a Germany in which there had just come to dominance a power-drunk fanatic, a ruthless activist who knew little of history and hated democracy; and the man we sent to him to represent American interests was a retiring scholar... who, in the character of his democracy, was perhaps the last pure Jeffersonian to be found in America.*

While Dodd discharged his duties with diplomatic correctness, he did not hesitate to express his own revulsion for Nazi ideology: he refused to accompany the diplomatic corps to Nazi party rallies in Nuremberg and delivered pointed lectures to German audiences on the painful American historical experience with freedom and slavery. In the end, he not only angered the Nazis, but annoyed his superiors in the State Department, who regarded his principled integrity as an obstacle to the supple operation of American foreign policy. Dodd returned to his farm in the Blue Ridge of Virginia in broken health but with his principles and idealism intact: a conviction that an understanding of history provided the only basis for rational public policy, and a belief in the transcendent value of the democratic ideal.
At a university heavily committed to scientific research, it was not surprising to find little solid support for including art within the curriculum. To some, the creative arts seemed out of place amidst empirical research. But to others, Lorado Taft and his Midway Studios provided a breadth of emphasis that enhanced the University’s educational mission.

While Taft held a regular teaching post at the School of the Art Institute of Chicago, his appointment at the University of Chicago was to the vaguely defined (and nontenured) position of “Professorial Lecturer on the History of Art.” Taft declared that he considered himself “in some sort ‘Sculptor to the University of Chicago.’”

While at Midway Studios, Taft was commissioned by the University to sculpt busts of George W. Northrup, Thomas C. Chamberlin, Silas Cobb, Sidney Kent, and Joseph Bond, and he also completed a marble bust of John Crerar that is now in the John Crerar Library. Much better known are his larger works, including Blackhawk at Oregon, Illinois, the Columbus Fountain, which stands in front of Washington’s Union Station, and two Chicago commissions — The Fountain of the Great Lakes at the Art Institute of Chicago and The Fountain of Time at the west end of the Midway Plaisance.

Completed in 1922, The Fountain of Time was intended as one in a series of bridges, monuments, and figures to stretch between Washington Park and Jackson Park. Taft derived inspiration for the sculpture, with its flowing line of humanity passing before a solid unmoving figure, from the sobering words of Austin Dobson’s couplet:

Time goes, you say?
Ah no, alas, time stays. We go.

Lorado Taft to William R. Harper.
December 21, 1898.

Taft’s approach to business matters reflected a personality similar to that of the Italian marble cutters he described to Harper.
Taft conceived of himself as an “art missionary,” and his conviction that art should support traditional social values helped foster his dislike for the modernist work he saw in Europe. He once said, “I cannot think of art as mere adornment of life, a frill on human existence, but as life itself.”

At Midway Studios, the carriage house and connected buildings that he converted into a studio, dormitory, and cultural enclave, Taft gathered around him aspiring young artists who shared his cultural idealism. Living, working, and eating together at the studio, they created what was called a closer approximation “to the Renaissance bottega than anything else in our times.” At the geographic periphery of the University, Lorado Taft’s conviction and example made a unique contribution to its communal life.
Students at the University of Chicago who took physiology courses from Anton J. (Ajax) Carlson learned to expect the unexpected. Not content simply to explain techniques and theories, Carlson insisted that lectures include real-life demonstrations and experiments. Students played a central role in these sometimes difficult and potentially dangerous experiments, and Carlson willingly took his own turn “on the table.”

As part of his search for a more complete knowledge of the stomach and the relationship between hunger and digestion, Carlson once fasted for fifteen days with a balloon crammed into his stomach to measure its contractions. His experiment helped disprove one of Pavlov’s classic theories by showing that gastric juices flowed regardless of the amount of food in the stomach. Carlson went on to argue that hunger was an independent, nonconditioned response.

Utterly devoted to empirical research, Carlson often reacted passionately to presentations he found insufficiently supported by evidence. His standard question, posed in a thick Swedish accent — “Vot iss de effifence?” — was applied to everyone, both inside and outside the scientific world. Carlson’s empiricism did not endear him to everyone. While in college studying for the Lutheran ministry, he suggested that the question of the efficacy of the power of prayer could easily be tested. Congregations could be asked to pray for rain and the results of their efforts could then be compared with the Weather Bureau’s rainfall records. This philosophy won him little support within the church and prompted his shift from theological studies to the natural sciences.

As a faculty member, Carlson defended empirical research and opposed what he considered the Neo-Thomist views of President Robert M. Hutchins. Carlson once remarked that if Hutchins had lived three hundred years earlier, he would have been a monk in a monastery.

A. J. Carlson combined sound scholarship with a sense of the dramatic and a flair for knowing how to capture the attention of an audience. Carlson not only taught well within the classroom, but also recognized student talent and knew how to cultivate it. Franklin McLean recalled how as a student, he had collaborated with Carlson on an experiment. When the published results appeared, Carlson had McLean listed as the sole author, a generous gesture that McLean never forgot. His crusty personality, blunt approach, and willingness to entertain made Carlson well known, but they did not overshadow his many contributions to science and medicine.
Physiology

Time, February 10, 1941.

Lauding "the most colorful figure among U.S. scientists," Time devoted a cover story to Carlson's success as a teacher and his comparative studies of the muscular action of the heart in humans and the horseshoe crab.
Edith Abbott drove her students hard, and her standards were high. One student commented, "[s]he really is a beautiful woman, but she scares me spitless." Such rigor was basic to Abbott’s larger approach.

When she came to Chicago in 1924, most social service agencies operated under private philanthropic or church control. By the time she retired, some thirty years later, government money had transformed the welfare program into a more centralized, all-encompassing system, a transformation Abbott believed in absolutely. At the School of Social Service Administration, Abbott trained students to administer the growing social welfare agencies and organizations. As researcher and educator, her primary goal was to aid the professionalization of social welfare administration.

Edith Abbott grew up in Grand Island, Nebraska, in a home where issues of justice, law, women’s rights, and state and federal control were considered important. After earning a doctorate from the University of Chicago, Abbott studied economics in London. She returned to Chicago in 1907 to live at Hull House along with her sister Grace Abbott, Jane Addams, Alice Hamilton, Florence Kelley, and Julia Lathrop. This core of female professionals was instrumental in directing many fundamental changes in welfare work during the early decades of the twentieth century.

At the University of Chicago, Abbott combined social work with academic research and pro-

Although Abbott was committed to rigorous professional training, she retained strong sympathies for the dedicated efforts of settlement house workers. Hull House was her home for many years, and Jane Addams and other residents were close personal friends.
fessional training, a conjunction some considered impractical. Abbott insisted on the juxtaposition because she believed the education of social workers too important to be left to amateurs, however well intentioned. Envisioning modern welfare work as the collaborative effort of specialists trained by practical experience and academic instruction, Abbott, along with her close associate, Sophonisba P. Breckinridge, strongly resisted the suggestion that the new School of Social Service Administration be included in the Department of Sociology. She argued that SSA needed the autonomy granted other professional schools. Approached much like physical ailments, social ills could be diagnosed and treated. Abbott likened the professionally trained social investigator to a surgeon "whose scalpel is to reach deeply."

At Chicago, casework and classwork linked theory, practical experience, and research. Faculty members closely supervised students, and grounding in theory was a prerequisite to practical application. Although accepted today as a basic tenet of social service, the system was revolutionary in the early decades of this century. Its legacy is the conviction that comprehensive social welfare programs, properly designed and administered, represent the best chance to root out society's ills. This conviction was the centerpiece of Edith Abbott's philosophy.

Edith Abbott, address on social investigation, manuscript.

Abbott argued strongly for a close working relationship between social science researchers and social work practitioners. "If social research is to go on," she notes in these remarks, "it can only develop scientifically with the help of well trained social workers."
hospital devoted to teaching and research remained an exciting but largely elusive goal for the first thirty years of the University's history. Although William Rainey Harper had forged an early affiliation with Rush Medical College in Chicago, he continued to hope for a University-based medical school.

After Harper's death, little progress was made toward establishing a medical program until 1916, when Abraham Flexner of the Rockefeller Foundation recommended that a medical school with its own hospital be established at Chicago. With strong support from the Rockefellers and the Billings family, planning moved forward only to be interrupted by the outbreak of war in Europe. By 1925, plans were well enough defined for President Burton to appoint Franklin C. McLean as the first director of the University of Chicago Clinics.

Although McLean was only thirty-five years old at the time, he had already planned, built, organized, and administered a complete medical school complex in China. Appointed by the Rockefeller Institute in 1916 to design "the prototype of an ideal institution of university medicine," McLean established high standards of teaching and research at the new Peking Union Medical College.

Even while serving as director of the University Clinics, McLean found time to conduct research. His laboratory work during this period included the development of a method for measuring ion concentrations in blood.
McLean came to Chicago hoping to replicate the Peking experience. Creating a first-rate medical school was a goal shared by McLean, the University, and the Rockefeller Foundation. Beyond that point, however, opinions diverged sharply. Even though his critics complained about its high cost, McLean insisted on a staff of full-time teachers and researchers in contrast to other medical schools where part-time instructors were drawn from the ranks of practicing physicians. He also encouraged the teaching and practice of psychoanalysis, a controversial position that won him little support from more empirically minded doctors and scientists.

The cost of maintaining a full-time staff of teaching doctors and scientists was always burdensome, but by 1935 it had become crushing. Faced with mounting personal and administrative battles, McLean resigned as director and committed the rest of a long and productive career to research.

McLean was also known for his interest in the ethical and social dilemmas of modern health care. At a time of widespread segregation, McLean provided crucial assistance in helping to organize Provident Hospital in Chicago and eased the educational burdens of black physicians by creating an affiliation between Provident and the University of Chicago hospitals. Whether as an administrator, teacher, researcher, or social activist, McLean’s career demonstrated his commitment to address social problems by improving the quality of health care.
Classical economics has long been a hallmark of the University of Chicago. Frank Knight, who came to Chicago in 1929 from the University of Iowa, helped create this association by developing an economic philosophy that celebrated the opportunities available in a competitive, largely unregulated economy. While at Iowa, Knight had begun to extol the virtues of individual economic freedom, claiming that exchanges in the free marketplace were mutually advantageous.

Yet Knight's view of economics and society was hardly simple or singular. He believed in the market because its alternatives were worse. Knight perceived unanticipated dangers that would challenge every effort to manipulate the economy or engineer society. Though his aversion to planning became increasingly unfashionable, he maintained it throughout the New Deal years, arguing that there probably was "no answer to the business cycle: maybe we have to let it take its course." His conservatism rested on the belief that most people failed to appreciate life's complexity and uncertainty. He doubted the possibility of anyone's knowing "the true, the good, and the beautiful."

Knight's economic philosophy was deeply influenced also by his view of history and his recognition of social change. He understood that an individual's sense of need could be subjected to exploitation, and he acknowledged the growing impact of advertising as an important factor in economic change.

Knight's relationship with the University had its stormy moments, especially during the administration of Robert M. Hutchins. Knight attacked proposals made by President Hutchins which he feared might threaten faculty independence. Throughout all his public discus-
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sions with intellectuals of the day ran his suspicion of any philosophy that suggested control or limitations on personal freedom. Time and again, opponents of Knight felt the sting of his biting prose and his unswerving logic.

Later in his career, Knight developed his theories of freedom, democracy, religion, and ethics. He relished the chance to debate opponents. As a member of the Committee on Social Thought, Knight contributed significantly to the academic disputes that raged throughout much of his tenure at the University. His barely concealed disdain for persons whom he felt compromised their positions, or were unwilling (or unable) to bring clearly defined ideals and goals into the fray, was evident in his characteristically detailed letters. While Knight once wrote that the original sin was “the human propensity to be simpleminded,” his actions suggest that an unwillingness to take a stand must have been a near second.

Personal morality in an impersonal society became an equally important issue for Knight. He was concerned about the standards used to guide societal behavior. Strongly anticlerical, he rejected religion for what he saw as its irrationality and uncritical thinking and for its restrictions on intellectual curiosity. Knight argued instead for an unfettered and uncompromising search for truth, a path he took throughout his career.

Frank Knight to Robert M. Hutchins, January 2, 1949.

Knight was among those on the faculty who sparred frequently with President Robert M. Hutchins. This letter, the first of an acerbic exchange on the subject of John Dewey, was typical of their correspondence.
Redfield began his anthropological training just as the discipline was completing its transformation from a museum-oriented field to one that sought systematically to study the "patterns and mechanisms of social behavior." As part of a department that was closely linked to sociology, Redfield set out to examine the modernizing process underway in many primitive areas around the world.

His interest whetted years earlier during a vacation, Redfield traveled to Mexico in 1926 and again in 1930 for what was to be the beginning of a comparative study of four communities at various stages in their confrontation with modern society. Published in 1930, as Tepoztlan: A Mexican Village, his dissertation marked the beginning of a series of books on peasant life in Mexico. Chan Kom (1934), the first of three books focused specifically on the Yucatan, was followed by The Folk Culture of the Yucatan (1941). In 1948, Redfield returned to Chan Kom and in 1950 published A Village that Chose Progress.

In addition to his research and teaching duties, Redfield served as Dean of the Social Sciences from 1934 to 1946. A close friend of Robert M. Hutchins, Redfield also organized the Atomic Energy Control Conference in September 1945. The aim was to look ahead...
to a world living with the consequences of atomic weaponry, and to begin formal discussions of the "techniques of moving toward a world government," one of Hutchins' favorite metaphors.

Redfield's anthropological interests shifted over time, a change reflected in the books he wrote during the 1950s — *The Primitive World and its Transformation* (1953) and *Peasant Society and Culture* (1956). Leaving the more narrowly defined field of folk and peasant studies, Redfield sought to understand the implications of wider cultural change. Influenced by the work of Milton Singer, Redfield began to synthesize anthropological studies into an historical study of civilization. The program resulting from his work encouraged the inclusion of non-Western civilizations as part of the University's course offerings in the College.

Included among a collection of essays compiled after Redfield's death in 1958 is a version of a lecture Redfield gave shortly after his appointment as Dean of the Social Sciences. The essay, entitled " Anthropology: Unity and Diversity," emphasized the point that anthropology stood astride the breach that separated historical and scientific inquiry. The archaeologist, anthropological

linguist, physical anthropologist, social anthropologist and ethnologist were all interested, he said, "in people in general, rather than their own people in particular." In this essay as throughout his career, Redfield emphasized a diversity of anthropological method and the unity that lay in a common way of looking at human culture.
Allison Davis first confronted the effects of social class on education while teaching English to black children in rural Virginia in 1925. A graduate of Williams and Harvard, Davis was discouraged to realize that "teaching in the standard manner made no sense to these poor and poorly schooled rural blacks. I decided that I didn't know anything to teach them since our backgrounds were so different, yet I wanted to do something to affect such students."

Deeply concerned by his experience, Davis returned to Harvard in 1951 and began graduate studies in social anthropology. Under the direction of W. Lloyd Warner, he embarked on an extensive study of class and race in the deep South. With Burleigh and Mary Gardner, Davis conducted field research in Natchez, Mississippi, concluding that Southern society consisted of a rigidly maintained color-caste system, each caste, the black and the white, having within it a stratified system of social classes. Broadening this work in collaboration with John Dollard of Yale, Davis prepared a comparative study of the effects of the color-caste system on the development of personality among black adolescents in Natchez and New Orleans. The two pathbreaking books produced by this research, *Children of Bondage* (1940) and *Deep South* (1941), were notable not only for their use of anthropological field methods but for their sobering portrait of


Written with Robert Havighurst, this paper was one of a series arguing that "the American social class system actually prevents the vast majority of children of the working classes, or of the slums, from learning any culture but that of their own groups."
the economic and racial order in America.

Accompanying Lloyd Warner from Harvard to the University of Chicago, Davis completed his PhD in anthropology in 1942. He accepted a position on the faculty of the Department of Education and Committee on Human Development, where he joined an innovative group of social scientists that included Ralph W. Tyler and Robert J. Havighurst.

With Havighurst, Davis studied infant and child rearing in white and black families in Chicago. He also initiated a major study of standardized intelligence tests being used widely in elementary school systems. In his Inglis Lecture at Harvard, Social-Class Influences upon Learning (1948), Davis argued that middle-class biases in IQ tests unfairly stigmatized lower-class children.

Three years later, along with Kenneth Eells, Havighurst, Tyler, and other colleagues, Davis published Intelligence and Cultural Differences (1951), a detailed analysis of class-based student responses to culturally weighted questions found on ten mass intelligence tests.

As a social anthropologist and psychologist, Davis pursued research on a wide range of problems in learning and personality: studies of relationships between academic performance and child development, attitudes and motivations of children from different social groups, and patterns of adolescent and young adult achievement. Davis's last book, Leadership, Love, and Aggression (1983) applied his fundamental conclusions about class and caste to profiles of the individual development of four prominent black leaders.

Davis drew satisfaction from the successful research he and his colleagues conducted at the University, particularly their challenge of biased intelligence testing. “This study had the most practical effect of any of my work,” Davis recalled later. “It led to the abolition of the use of intelligence tests in New York, Chicago, Detroit, San Francisco, and other cities. This was one time I got what I wanted: a direct effect on society from social science research.”
When the Geiger counters reached their crescendo on a December day in 1942 under the west stands of Stagg Field, a major step had been taken in the understanding of atomic energy. By setting in motion a controlled self-sustaining nuclear chain reaction, Enrico Fermi and his colleagues began a process whose consequences continue to affect the course of modern history.

Awarded the Nobel prize in 1938 for his work in Rome on neutron physics and atomic transmutations, Fermi seized the occasion as an opportunity to flee Mussolini and Fascism, bringing his wife Laura, who was Jewish, and their children out of Italy. Fermi was to become one of many European immigrants who played critical roles in developing the atomic bomb.

In October 1939, fearing that German physicists were making rapid progress in their efforts to develop an atomic bomb, Fermi, Leo Szilard, and Eugene Wigner alerted President Franklin D. Roosevelt to the potential threat. By late 1942, the Manhattan Project was well underway and Fermi had moved his base of operations from Columbia University to Chicago under strict wartime security. Even Fermi’s wife knew nothing of the actual purpose of her husband’s work. In 1944, he went on to Los Alamos, New Mexico, to join the team of scientists assembling the bomb. There, in the desert, he observed the first explosion of an atomic bomb on July 16, 1945.

Fermi’s singular devotion to his work was not uncommon. Unlike many of his colleagues, however, any moral dilemma he confronted in building a weapon of mass destruction was overridden by his belief that Fascism and tyranny were the greater evils. He was one of four scientists comprising the “Interim Committee” that recommended to President Truman that the bomb be used. Fermi well understood the power of the new weapon but had resolved the inner struggles that were to haunt other scientists for years.

In the aftermath of the war, many scientists became targets of the anticommunist crusades of
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the early 1950s. Fermi was often called upon to vouch for the character of his colleagues, but his strong support of the United States war effort and an aversion to most political activity kept him out of the spotlight.

As the war ended, so did the need for the Manhattan Project. Fermi accepted an appointment in the Department of Physics at the University of Chicago. Hoping to keep the spirit of collaborative research alive, the University created the Institute for Nuclear Studies to retain many of those who had collaborated on the Manhattan Project.

While on the faculty, Fermi conducted research at the recently established Argonne National Laboratory and worked with the new cyclotron the University operated after 1951. Spared administrative duties, Fermi took an active role in the Department of Physics and proved to be a memorable and effective teacher. Presenting lectures and giving exams brought him into contact with students who responded positively and warmly. His fame and heroic stature provided something of a classroom aura, but they affected neither his modesty nor his simple tastes.

Enrico Fermi, laboratory notebook, 1941.

In the months before coming to Chicago in the spring of 1942, Fermi and his team of physicists at Columbia University worked on a preliminary design for an atomic pile. With Leo Szilard, Walter Zinn, Herbert Anderson, and other colleagues, Fermi devised a lattice structure of graphite and uranium oxide for an "exponential" pile and calculated the requirements for a self-sustaining chain reaction.

\[
\frac{50}{27} = 2.27
\]

\[
\frac{2.13}{1.15} = 1.85
\]

\[
\frac{1}{0.5} = 2
\]

\[
\frac{5}{1} = 5
\]

November 3 1941

\[\Sigma_f = \text{fission cross-section above thermal}\]

\[\Sigma_f = \text{fission cross-section below thermal}\]

\[\nu = \text{no. of neutrons per fission}\]

\[p = \text{probability that first collision finds}\]

\[1-p = \text{no. of neutrons below thermal}\]

\[0.7 = \text{probability of fission below thermal}\]

\[0.3 = \text{probability of capture below thermal}\]

Condition for chain reaction

\[
\frac{q\nu}{1-p\nu} > 1
\]
After winning the Nobel prize in 1926, the career of James Franck took several sharp turns as the world drifted toward war. Shortly after Hitler’s rise to power, Franck resigned as a professor of physics at the University of Göttingen to protest the Nazis’ newly passed anti-Semitic legislation. An academic refugee, he taught at Johns Hopkins and Copenhagen before making his way to the University of Chicago, where he remained on the faculty until his death in 1964.

Trained as a physicist, Franck’s interests in photosynthesis led him progressively into the fields of chemistry and biology. By applying the principles of physics and physical chemistry to photosynthesis, Franck felt he could explain the process more accurately. Although the problems proved to be more resilient than he anticipated, his work remains important today. Since his death, some of his most important and controversial claims have been proven correct.

Franck worked in an era when the intellectual foundations of science were being transformed, its secure Newtonian base weakened by the challenges of relativity. With the development of the atomic bomb, many scientists found themselves confronting moral challenges as well. Franck was one of those whose concern with these moral implications led to philosophical introspection and political action. There had been some preparation for this. While Franck might have yearned for the comparatively quiet decades of the late nineteenth century, his experience under Hitler and the fate of many friends and colleagues who remained in Germany convinced him that
the evil Hitler both represented and embodied could not be tolerated.

As the bomb neared completion, Franck and some others working on the Manhattan Project became convinced of the need for restraint and caution as the United States government decided on its use. In the famous "Franck Report," he joined with other prominent scientists voicing concern over the precedent the use of the bomb on populated areas would set. Their argument that a preliminary demonstration of the bomb's force in an unpopulated area would persuade Japan to surrender was not accepted, and the debate over Hiroshima and Nagasaki continues today.

After the war, despite the high hopes for permanent peace and establishment of the United Nations, the potential for future wars seemed to increase. Franck recognized the new set of perils and argued that the only hope for a stable future was for a complete exchange of scientific data among nations. As the fear and paranoia of the Cold War settled in, his voice was lost amid growing mistrust between East and West.

Nobel prize in physics, 1926.
When Franck left Denmark in 1935, he did not take his Nobel medal with him. To prevent it from falling into the hands of the invading Nazis in 1940, George de Hevesy dissolved the medal in aqua regia. Recast from the original precipitate after the end of the war, it was presented to Franck a second time in 1952.

University of Chicago, security pass, November 19, 1942.
Shortly before Enrico Fermi conducted the first controlled, self-sustaining nuclear chain reaction, Franck reluctantly joined the Manhattan Project. Appointed head of the chemical laboratory that worked with "actinades," including the new man-made plutonium, Franck left the project before the war ended.