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William R. Kimel
ANS president

Bill Kimel: a matter of commitment

His work is not specifically nuclear; his education (formal, at least) is in other disciplines; and his career currently is not dependent on the rise or fall of nuclear technology. How is it, then, that this man is now assuming the presidency of the American Nuclear Society? The answer, essentially, is that he is Bill Kimel, an extraordinary nuclear man committed to an idea and willing to work hard for its fulfillment.

William R. Kimel, 56, dean of the College of Engineering, University of Missouri–Columbia since 1968, made his mark in nuclear engineering in earlier years, when in 1958 he established at Kansas State University what would soon become the first accredited undergraduate nuclear engineering program in the United States. Operating on a shoestring budget, he and his colleagues built a research reactor there and set a stiff pace for many larger institutions in creating a sound nuclear engineering education program at both the undergraduate and graduate levels.

His present activities as dean of engineering, as broad as they are, have not diminished Kimel's appreciation for the necessity of expanding the role of nuclear power to meet present and future energy demands and to reduce dependence on imported oil. He sees this expansion as essential to the survival of the nation's economic system.

A big man, six-foot-four, with long arms and legs, large head, broad cheekbones and brow, and full jaw, Kimel strikes an imposing figure. Like many men of his size, however, he has a modest demeanor, and often speaks in subdued tones, almost laconically. And yet he does not lack assertiveness on matters of importance. One of his former colleagues at Kansas State described him as "highly self-disciplined, hard-working, and bright, an administrator who makes things happen." He demands much from himself and from those who work for him. He has a characteristic Midwestern sense of humor and a strong common-sense approach to things. He doesn't stand on ceremony, rarely keeps his suitcoat buttoned, and generally is informal in his relationships to others. Strong in organization work, he is an effective communicator and will battle for a good cause.

Kimel: Big man for big job

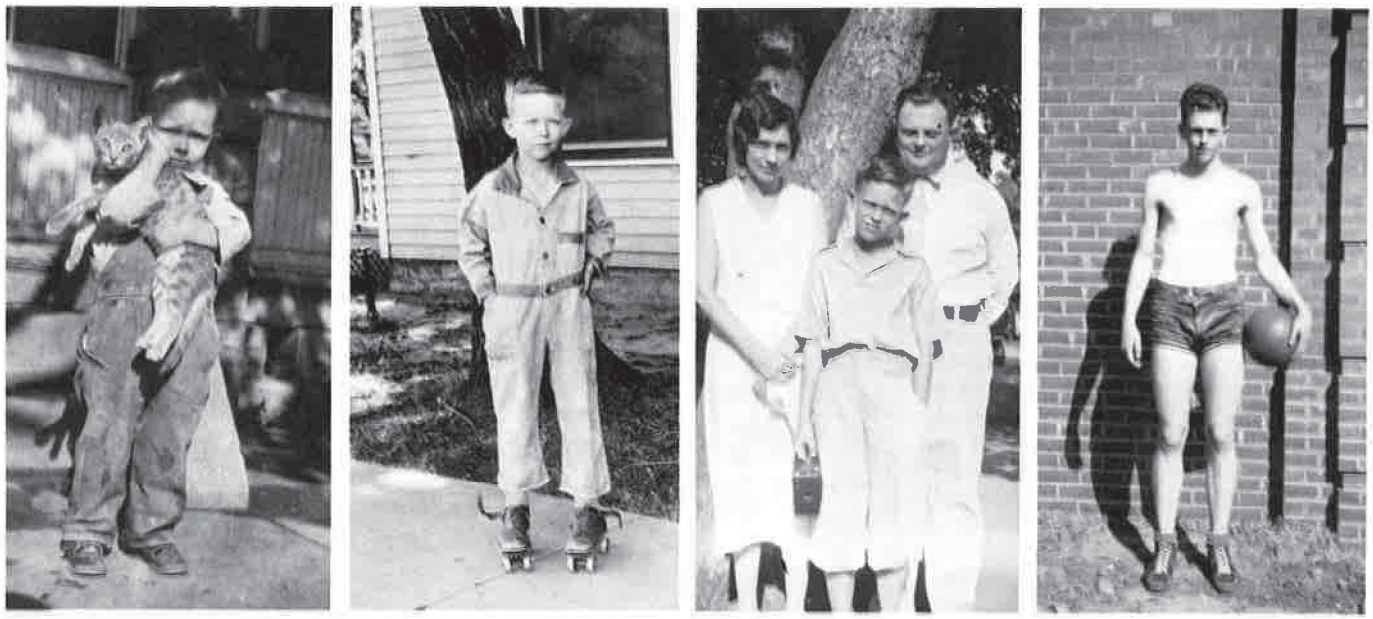
Boyhood

Of German-English descent, Kimel was born on May 2, 1922, in Cunningham, Kans., about 60 miles west of Wichita. He was the only child of Chester Leroy and Klonda (after Klondike, of Gold Rush fame) Kimel. His father, whose parents were the children of homesteaders who settled near Clearwater, Kans., was an educator. Soon after graduating from the University of Kansas, he was appointed high school superintendent at Cunningham, where he met Klonda Hart, an accomplished musician.* Kimel's father's work later took the family to Conway Springs, Kans., where young Bill attended all but the last year of grade school, and finally to Clearwater, the place of Chester Kimel's birth. Here Bill's father served as superintendent of schools and as principal of Clearwater High School (from which he himself years earlier had been graduated as one of the four members of its first graduating class).

In this small-town, almost rural, atmosphere, young Kimel enjoyed a happy and active childhood. He carried newspapers and magazines and, when he was old enough, worked summers on the farms of relatives or neighbors. He also did his share of hunting and fishing, learning these arts in the company of his friends.

He was a good student right from

*Kimel traces his own love for music to hearing his mother play classical and popular music on the piano for two or three hours a night in their home. He himself studied voice and trumpet in his youth and almost, in fact, accepted a scholarship to study music at a local college in Kansas. He played with a number of high school and college bands, and as recently as five years ago played with a faculty band at the University of Missouri.



Growing up in Kansas, under parents' loving care, to the all-arms-and-legs stage as a high school (sophomore) athlete

the beginning,** and was strongly influenced, of course, by his father, whom he remembers as a "hard-driving taskmaster." He enjoyed no special privileges when he attended the high school of which his father was principal. In fact, he says his father made it quite clear that "I'd better study like heck." He benefited directly from his father's teaching in some of his math classes, since his father, as principal, also undertook to teach some pre-college courses in math, such as trigonometry and solid geometry, which at that time were not generally offered in a small high school.

Athletics were also a big part of Bill Kimel's life, especially during his high school years. He participated in every sport the small school had to offer—football, basketball, and track—and was equally adept in all three. By the time he was a senior in high school, he had achieved his full height of six-foot-four and tipped the scales at 190 pounds, making him a formidable defensive end on the football team (he played tailback on offense). Still, he was not the biggest man on the team, which included a number of "raw-boned farmer boys," the biggest of whom weighed 275 pounds. The team regularly won the league championship. In basketball he played center and did well, and in track he participated in a number of events, including shotput (about 50 feet), discus (145 feet), high jump (6 feet, using the Western roll), and pole vault (12 feet, 3 inches). He also occasionally ran the dash leg (110 yards) in the medley relay. He prizes a pair of trophies awarded to him for winning the shotput and pole vault events in the state-wide Anthony Relays during his senior year in high school.

Higher education

As a result of his performances in sports, Kimel was offered athletic scholarships from a number of colleges and universities. His father advised him, however: "If you want to become an athletic bum, it's all right with me, but you won't get any help from me. I really can't afford to help you very much, but I will help you if you want to study." It was stern advice, and Bill took it to heart, for although he did accept a combination academic/athletic scholarship from Wichita University (now Wichita State University), his emphasis went strongly to academics. He stayed at Wichita for one year, and then transferred to Kansas State College of Agriculture and Applied Science (which has since become a university), at Manhattan, Kans. His participation in athletics was limited, although he did win a letter in track and participated in his senior year as a tackle on the football team (first string until he was disabled in a game with a knee injury). His academic work earned him the College's coveted Pi Tau Sigma† sophomore honors and ultimately a bachelor of science degree in mechanical engineering, with honors (3.59 in a 4-point system).

At this time he also became extremely active in student government and social activities, serving as president of the junior class, of his fraternity, and of the student chapter of the American Society of Mechanical Engineers; serving as vice president of the student council; and belonging to four different honorary fraternities—all of this in an accelerated (three-year) program.

While this period was a time of strong intellectual and social development for Kimel, it was also a time of tragedy. His father died of a stroke

Kimel (on platform) as an undergraduate mechanical engineering student at KSU

**His third grade teacher, in an end-of-the-year note to young Bill, made the prophetic comment, "I am sure you will be successful in whatever you strive to do, and someday I expect to see you as the principal of some large school or, even better, a college professor."

†Honorary mechanical engineering fraternity at Kansas State University.

in September 1943, and shortly thereafter, in April 1944, his mother died. Kimel's graduation in January 1944 fell squarely between these tragic events.

Armed with his BS degree, the 21-year-old graduate took his first industrial job with Goodyear Tire and Rubber Company, in Akron, Ohio. As a design engineer, he worked in the aircraft design section and was involved in engine mounting design work for the B-17 and B-29.

After three years at Goodyear, Kimel was offered an opportunity to return to Kansas State as an instructor. One of the main attractions of the job was that he would be able to pursue his master's degree, and so he accepted the position in 1946. He discovered soon that he enjoyed teaching immensely. He gave courses during those years in kinematics and kinetics, mechanisms, thermodynamics, machine design, engineering mechanics, engineering graphics, and descriptive geometry. In the course of this work, he earned an MS degree in mechanical engineering in 1949.

The year 1949 was important to Kimel in another respect, for it was during this year that a petite (five-foot-two) sophomore at the College by the name of Mila Brown took a job as a part-time secretary in the Machine Design Department. The job was important to her as she was the eldest of six children, raised in Prairie View, Kans., under relatively modest circumstances; her father was an agent telegrapher for the Rock Island Railroad. She worked with the department for the rest of her undergraduate career. There's no doubt that Kimel must have been attracted early to this bright, cheerful, and very pretty young woman, and yet apparently he was almost completely absorbed in his work (he was a "very serious man," recollects Mila), and he was inhibited as well by a rule at Kansas State that prohibited dating between students and faculty. Under the prodding of mutual friends, however, Bill and Mila did begin to meet socially, and their relationship deepened into love.

Honeymooners

Kansas State faculty members gather for a photo (l-r): Robert Clack, S. Z. Mikhail, Kimel, John Fagan, Richard Bailie, and John Mingle

Mila was graduated in 1951 and taught music at public schools at Morganville, Kans. During the same year Kimel set to work building a house in Manhattan. It was a fine home, with two fireplaces, two bedrooms, and a full basement. He and Mila would live there for 17 years as husband and wife. They were engaged in May 1952 and were married the following August.

Scholarship remained the focal point of Bill Kimel's life, however, as he continued to take courses at Kansas State, with the ultimate aim of obtaining a PhD. Through all of this, of course, he was working full-time as a teacher. During the summer vacation periods he gained valuable experience working in industry: in 1953 as a senior tool engineer for Boeing Airplane Company in Wichita, Kans.; and in 1954 as a design engineer for the Gas Turbine Division of Westinghouse Electric Corporation in Kansas City, Mo.

In 1955 Kimel got his chance to pursue his PhD in earnest. He had fellowship offers from both the University of Illinois and the University of Wisconsin. Both had excellent programs, but Kimel decided in favor of Wisconsin because he wished to study engineering mechanics under one of his former mentors at Kansas State, Prof. Gerald Pickett, a teacher he idolized who had since gone on to the University of Wisconsin. Much to Kimel's surprise, when he arrived in Madison to begin the fellowship (on sabbatical leave from Kansas State), he learned that Pickett was just about to leave the country on a sabbatical of his own. Kimel says he got to Pickett's office just in time to greet him and let him know he was there. Pickett said to him, "That's fine, Kimel, you can rent my house and have my office, because I'm going to India!"

Being one of Pickett's disciples worked in Kimel's favor when, during his work at the University of Wisconsin, he applied for a job at the U.S. Forest Products Laboratory in Madison. Pickett's reputation was strong at the FPL, and Kimel was hired on the spot on a WAE (when actually employed) basis, thus able to put in hours when he could. He worked there on an Air Force Institute of Technology (AFIT) project involving design criteria for sandwich panels with honeycomb orthotropic cores. All the while, of course, he was working on his PhD, and Mila, as she had done in Morganville and Manhattan, taught music in a school at Stoughton, Wis.

Entry into nuclear physics

Kimel received his PhD in engineering mechanics in September 1956, whereupon he returned to Kansas State University and his teaching career. At about this time he came under pressure from the dean of engineering, M. A. Durland—and from Henry T. Ward and A. B. Cardwell, heads of the University's Departments of Chemical Engineering and Physics, respectively—to form a nuclear engineering department. Ward was already offering a nuclear option as part of the chemical engineering program, but strongly believed that there was enough to nuclear to establish it as a department on its own. Kimel, however, on a number of occasions, turned down invitations to set up such a department, feeling that he should work in directions closer to the lines of his formal education. Then, in 1957, he was offered a post at the University of Wisconsin, and this, in a way, forced him to make a firm decision about his career: Wisconsin or Kansas State. He decided to stay with Kansas State and to take up the challenge of setting up a new nuclear engineering department.

To prepare for this task, Kimel ob-

tained, through Ward's good offices, a job at Argonne National Laboratory in Illinois. He was employed for one year, 1957, as a resident research associate on loan from Kansas State. Working with nuclear physicists on various projects at Argonne, including some reactor kinetics problems, Kimel learned a great deal and discovered that much of his earlier work in engineering mechanics (statics, dynamics, elastic stability, plates and shells, vibration) pertained very much to nuclear engineering. In his work he was free to attend courses in Argonne's International School of Nuclear Science and Engineering, then under the direction of Roland G. Taecker. This school at that time played a key role in getting declassified nuclear information out into the universities under the aegis of the Atoms for Peace program. Kimel's progress at Argonne was steady, and near the end of his stay he himself was helping direct a group of students at the school.

Another benefit of the year at Argonne was Kimel's exposure to a number of students and others working there, some of whom would later join him at Kansas State as members of the faculty, including S. Z. Mikhail, Richard Bailie, John Fagan, and Milan Copic. (In the case of Copic, he would come to Kansas State as a visiting professor and would lend his great versatility as a reactor physicist to the project under which Kansas State brought its TRIGA Mark II reactor into operation. He would subsequently return to Yugoslavia to build a TRIGA Mark II at the Josef Stefan Institute, where he is head of nuclear engineering.)

Kimel returned to Kansas State University in 1958 to establish the nuclear engineering department—becoming in 1962 the first accredited program in the United States to offer a BS in the discipline. The department began with only two faculty members, Kimel and Robert Clack, who had earlier come out of the Mechanical Engineering Department at Kansas State to work with Ward in the Chemical Engineering Department's nuclear option program. Shortly thereafter, Mikhail, described by Kimel as "a physical chemist extraordinaire," became the third member of the faculty. The department, under Kimel, in later lears would grow to 13 faculty members, serving some 175 students.

Kimel says that the department started out with a good strong connection in chemical engineering and later expanded that to mechanical engineering. Later a third discipline in electrical engineering was added. Kimel believed that this approach of maintaining strong connections with "traditional" disciplines, adding the nuclear engineering components as they were perceived to be needed, was very important to the department's success. Under this approach, a student would earn a bachelor's degree in nuclear engineering with a strong major in a related discipline (mechanical engineering, chemical engineering, or electrical engineering).*

The building of the TRIGA Mark II reactor, supplied by Gulf General Atomic Company (now General Atomic Company) and built with Holmes & Narver as general contractor, was an ambitious project for the new department. The experience of selecting the reactor, obtaining the necessary funds, matching a new building to the facility, getting a license from the Atomic Energy Commission, working with the local community and the state, and dealing with suppliers and contractors did much to develop expertise in the department. According to Walt Meyer, presently chairman of the Nuclear Engineering Department at the University of Missouri, under Kimel, and formerly a member of Kimel's faculty at Kansas State, the facility was probably the cheapest research reactor ever built. It illustrates, he says, the way Kimel is able to "work minor miracles with small amounts of money." The reactor went critical in October 1962.

The move to Missouri

After 10 years as chairman of the Department of Nuclear Engineering at Kansas State, during which time he developed a strong, well-founded program at both undergraduate and graduate levels, Kimel felt the need to seek new challenges. In particular, he believed that he could make contributions as dean of engineering that he could not make as head of a department. When his availability became known, a number of institutions offered him positions as dean of engineering. One of the offers came from John Schwada, chancellor of the University of Missouri.** Bill and Mila both had decided they would like to stay in the Midwest, and on a visit to Columbia, the town and the University,† they liked what they saw. Kimel, then 46 years old, accepted the position and has served in that capacity over the past 10 years.

While not in the giant class, along with such Midwestern schools of engineering as Wisconsin, Illinois, or Purdue, the College of Engineering at Columbia (along with its satellite program at Kansas City, Mo.) currently takes in 2847 students, three-fourths of whom attend classes at the Columbia campus; about 2220 of these are undergraduates, with the balance working on advanced degrees. The College offers academic programs in agricultural engineering, bioengineering, chemical engineering, civil engineering, mechanical and aerospace engineering, industrial engineering, electrical engineering, and nuclear engineering. The last-mentioned is offered on a graduate level only; there are presently some 60 students doing graduate work in nuclear.

Concerning the prospects of nuclear engineering, Kimel is worried that because of the present climate of opinion about nuclear power and, in particular, because of the Carter Administration's ambiguous posture concerning nuclear, many of the best potential candidates for nuclear engineering are being lost

Rewarding moments as a dean: Awarding an honorary degree to astronaut Buzz Aldren and crowning the St. Patrick's Day "Queen of Love and Beauty"

*Later, at the University of Missouri, Kimel would inherit a system under which the student would earn his bachelor's degree with a major in mechanical, electrical, chemical, or civil engineering and take an option sequence in nuclear engineering. The student could then choose to go on to earn a master's degree or PhD in nuclear engineering. Kimel believes that both approaches have their merits and that neither is "right" or "wrong." He is happy that both approaches are available in the United States, because, taken together, they provide a valuable mix of educational advantages to serve government and industrial needs.

**Succeeded by Herbert W. Schooling and, just recently, Barbara S. Uehling.

†Founded in 1839, the first state university in the United States west of the Mississippi River.

currently to other disciplines. Engineering enrollment at Missouri–Columbia is presently at an all-time high, but this cannot be said of the nuclear engineering program. Kimel notes, however, that a discipline neglected at one point in time very often becomes a field of great demand by the time a student goes through the educational cycle. Job opportunities for nuclear engineering graduates from Missouri–Columbia continue to be good, Kimel says.

He believes that in both nuclear engineering and chemical engineering programs greater emphasis should be placed on the chemical engineering aspects of nuclear, although here again the posture of the federal government with regard to reprocessing would seem currently to run counter to this perceived need.

Although not a facility of the College of Engineering, the University of Missouri research reactor (MURR), is used very much by the faculty and students not only in nuclear engineering but in other disciplines as well, especially medicine. Maintaining a 150-hour, seven-day schedule and operating at 10 megawatts, the reactor is claimed to be the highest powered university research reactor in the United States. Its director is Robert Brugger, who happens also to be a member of the nuclear engineering faculty.

Kimel's life as dean of engineering is a busy one. He holds frequent interviews with students and faculty, who come to him more often than not with problems. He spends much of his time working with his department chairmen, the University's upper administration, and the alumni. His college administers a research budget currently running at about $1.9 million in annual expenditures from external grants and contracts, some 200 in number. He sometimes feels spread thin by the many, diverse functions that are the responsibility of a dean, in contrast to the simpler life as chairman of a nuclear engineering department, but he believes he is performing an important role and takes no small satisfaction from this.

Bill and Mila

At home with the Kimels

The Kimels live comfortably in a home on a hilly lot on the outskirts of Columbia, where they lead a quiet, but nonetheless active, life. They collect antiques, enjoy listening to good music (Bill, who likes to dabble in electronics, has built three do-it-yourself stereo systems over the years), and do lots of reading. They both regularly attend athletic events at the University, and often entertain students at their home. Mila, in fact, was recently voted faculty wife of the year by the students in recognition of her support of student and civic activities. Although they have not had any children of their own, they draw much pleasure from this contact with young people.

In addition to acquiring antiques, Kimel collects beer steins and rifles. His prize possession among his 13 guns is a "sporter" that he fashioned himself from a Springfield, sawing 3 inches off the barrel, restocking the rifle, and fitting it with a telescopic sight. He occasionally hunts for quail, ducks, or pheasant.

He is also interested in photography and shot several rolls of film during his recent trip to Japan and the People's Republic of China. Mila accompanied him on this trip, taken in late April and early May by the contingent from the American Nuclear Society (see separate story, p. 79). Both found the experience extremely interesting.

Bill and Mila spend many hours with a friend who owns some land just outside of Columbia, where they work about one and a half acres of land, raising tomatoes, beans, cucumbers, corn, beets, and other vegetables. Mila cans or freezes some 200 quarts annually from this endeavor.

In addition to all this, each of them keeps up an incredible schedule involving social and civic organization work. Bill belongs to the Missouri Atomic Energy Commission,* the Engineering Council for Professional Development (board of directors), Junior Technical Society (president-elect), the American Society for Engineering Education (chairman, honors and awards policy committee; board member, Engineering Colleges Council), Missouri Society of Professional Engineers (chairman, Education Advisory Council), Columbia Rotary Club (of which he was vice president/president-elect, but begged off on assuming the presidency when it conflicted with his scheduled term as ANS president), and the Columbia Chamber of Commerce (board member and vice president for industrial development, 1977–78). Mila does a good deal of voluntary work with local hospitals, and is active in the P.E.O. Sisterhood, a philanthropic/educational organization (for which she has served as president at different times and places for a total of five years). She is also a member of King's Daughters, a Christian social organization, and of Eastern Star (Bill is in Shrine). The Kimel's belong to the Methodist Church.

*Formerly he was a member of the Kansas Governor's Advisory Committee on Atomic Energy (1961–65) and a member (1964–68) and chairman (1966–68) of the Kansas Governor's Nuclear Engineering Advisory Council.

Second love: music

The ANS connection

Kimel joined the American Nuclear Society in 1958 and has been working in the organization in various positions since that time. He has primarily been identified with the Education Division. Named a Fellow of the Society in 1969, he has served on many of its executive, planning, and steering committees. He was elected to the Board of Directors for the term 1973–76; he has served on the Executive Committee since 1974. Last year he was elected vice president/president-elect, and now assumes the presidency of the organization. His term is expected to give further evidence of his continued commitment to the future of nuclear energy.—*Chris FitzGerald*