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Memorial Tributes: Volume 1

Thomas Christian Kavanagh

1912-1978

By Anton Tedesko

Thomas C. Kavanagh was born August 17, 1912, in New York City and died May 23, 1978, in Florida. At the time of his death, he was a partner in the consulting firm of Iffland-Kavanagh-Waterbury, Engineers-Architects-Planners. He was a Founding Member of the National Academy of Engineering (NAE) and served as its Treasurer for ten years, from 1964 to 1974.

Tom considered himself a consulting engineer and an educator. He was a civil engineer, a renowned structural designer, and, long before the term was invented, a systems engineer. He was also a person of great vision, with superior technical ability, great optimism, energy and social consciousness, deeply involved in all phases of his discipline, committed to engineering work, dedicated to engineering causes, a leader in the technology of engineering, and a strong symbol of the best in the profession.

Tom had become fluent in German and maintained a familiarity with the contents of German technical publications. He never said "no" when asked to do something for the profession. When others failed to do what was required, Tom took over. When it was necessary to criticize, he did so in a pleasant way and with a smile. He started many young people on the route to professional work and encouraged their making contributions through committee work and publications.

He had a unique ability to bridge the gap between the academic and the practitioner's viewpoints and was held in high regard by

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both sides. He could translate issues and considerations peculiar to the building industry into terms understood by those on the outside. When Tom explained why something was impractical, people usually understood.

Tom understood the socioeconomic side of engineering-the positive and negative impacts of a proposed action-and was able to articulate it well. He was a patient listener, an effective adviser, and a good mediator. His approach was soft and diplomatic. He did not shirk difficult assignments and was equally at home among his peers as he was among junior groups.

Tom was conscious of an engineer's duties and service to mankind; he was conscientious, thorough, inventive, with a drive for improvements wherever he had any influence. He thought of civil engineering as the basic civilian discipline (in contrast to military engineering), the parent discipline from which spawned all the other branches of engineering. Specialties such as ocean engineering, in which he was interested, were part of Tom's civil engineer's world. This world Tom described as "encompassing that boundless activity directed toward fulfillment of human needs through adaptation and control of the land-water-air environment-a truly tremendous scope."

Tom, starting at an early age, was pretty much on his own. What he became was due to his drive, stamina, and intellect. A scholarship enabled him to begin his studies in engineering and allowed him to go to the Technological University of Berlin, Germany. He earned the Bachelor of Science and Master of Civil Engineering degrees from the City College of New York, a Master of Business Administration degree M.B.A. in finance, and a science doctorate from New York University (NYU). He became a structural designer, working for engineering firms in New York and Pennsylvania on railway and highway bridges, sanitary plants, industrial structures, transmission towers, power plants, waterfront structures, floating docks, and refineries. He was an aircraft engineer in World War II.

After several years as an Assistant Professor of Civil Engineering at New York University, Tom became a Professor at Pennsylvania State University and, in 1948, Head of its Structures Department.

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In 1952 he moved back to New York University and became Chairman of the Department of Civil Engineering. In 1953 Tom started to spend one afternoon a week working with the consulting firm of Praeger & Maguire, which had not been strong in the structural field. It did not take too long until Tom joined this organization as a full partner, with the firm's name changed to Praeger-Kavanagh, and later to Praeger-Kavanagh-Waterbury. However, Tom kept up his teaching activities as an Adjunct Professor at NYU until 1956 and at Columbia University thereafter. During this period he was responsible for a number of outstanding engineering projects, including the Arecibo (Puerto Rico) radio telescope (the world's largest), the Hawkins Point Bridge, the planning for the Caracas (Venezuela) subway system, and the Long Island Sound bridge crossing. He also worked on the New York City Building Code and on design manuals for the U.S. Army.

Following a merger in 1969 involving Tom's company and another engineering firm, Tom joined Louis Berger International Incorporated in 1975 and became a Vice-President, managing large projects in Cyprus and Lagos. In 1976 he founded Iffland-Kavanagh-Waterbury, a consulting firm undertaking projects similar to those carried out by the Praeger-Kavanagh firm.

The variety of Tom Kavanagh's activities is hard to envision. Likely no other man involved in the work of dozens of committees, commissions, councils, or boards has made as many personal contributions on such a wide variety of subjects. He was a member of twenty professional societies. In the course of twelve years he served on twenty NAE committees. At one time or another he led twenty professional working groups; only ten of the twenty groups he headed as Chairman are listed here as examples: Committee on Ocean Engineering of NAE (this name later was changed to Marine Board), Finance Committee of NAE, Civil Engineering Peer Group of the Committee on Membership of NAE, Metropolitan Section of the American Society of Civil Engineers (ASCE), Research Committee of ASCE'S Structural Division, U.S. Council of the International Association for Bridge and Structural Engineering, Committee on Systems Engineering of the Consulting Engineers Council, Commission on International Relations of the Engineers Joint Council,

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Ethical Practice Committee of the Consulting Engineers Council, and Committee for Coordinated Construction Activity of the Building Research Advisory Board of the National Research Council (NRC).

Tom headed program committees, technical sessions, nominating boards, university advisory boards, and accreditation and educational committees. As ASCE Director, he represented those members who were not residents of the United States. He was a founding member of ASCE's Research Council for the Performance of Structures and for years was most active in the Column Research Council, later known as the Structural Stability Research Council. For six years he served on the NRC's Building Research Advisory Board (one year as Vice-Chairman). In the 1960's he served in the leadership of the Engineers Joint Council (as Senior Vice-President in 1971-72). A wide diversification of interests, a multidisciplinary approach to engineering projects, as well as a strong feeling for aesthetics, were his hallmark.

Tom Kavanagh was the author of over 100 technical publications. He received recognition and awards from numerous professional societies and agencies. These include: an Honorary Engineering Doctorate from Lehigh University; the Ernest E. Howard Award of ASCE for his Contributions to the Advancement of Structural Engineering; the David Steinman Medal for Structural Engineering from the City College of New York; the Gold Medal of the Architectural League; and an Honorary Life Membership in the New York Academy of Sciences.

During the 1970's he was most active in the Council on Tall Buildings and Urban Habitat. As a charter member of the Council's steering group, he touched everyone's thinking as he strongly urged the "systems approach" and the need to recognize the broader aspects of the impact of high-rise buildings. During one of his last series of trips to Egypt (1974-75) for Tall Building Conferences in Cairo, he was an important contributor and had meetings with the Minister of Reconstruction.

The engineering profession was Tom Kavanagh's whole life; he had no interest in "hobbies." It is only natural that he was a driving force among the twenty-five engineers, representing a broad spec

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trum of the profession, who in 1964 created what became known as the National Academy of Engineering. Tom was elected a Member of the Council of the new Academy. He was very much concerned that the quality of new members of the Academy be maintained at the highest level. His interest in improving the mechanism of the selection and election process continued when he himself served on the Committee on Membership.

When NAE President Robert C. Seamans, Jr., resigned that position in 1974 to accept an appointment by the President of the United States to an important Government position, Thomas Kavanagh headed the search committee for a new President of the Academy. When Courtland D. Perkins was named as a candidate, Tom's committee was instrumental in persuading Dr. Perkins to accept the nomination; his election to the presidency followed in 1975. Through this action Thomas C. Kavanagh left his final imprint on the Academy.

Dr. Kavanagh was married to Kerstin E. Berglund and had three children.

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