

MEMORIAL RESOLUTION

DUNJA GRIBIĆ-GALIĆ (1950 – 1993)

Dunja Gribić-Galić, Associate Professor of Environmental Microbiology in the Department of Civil Engineering, died of heart failure at Stanford on August 20, 1993, after a long struggle with scleroderma, an auto-immune disease. She was 43 years old.

A brilliant theoretician and gifted experimentalist, Dunja broke the confines of conventional microbiological wisdom by demonstrating the existence and environmental relevance of degradation pathways that had hitherto been neglected. She was the first to prove that aromatic hydrocarbons can be transformed under environmental conditions in the absence of oxygen.

Born in Zagreb, Croatia on 21 April 1950, she attended the University of Zagreb, where she was awarded the Bachelor of Science degree in biology in 1972, graduating with highest honors and receiving the Best Student of the University Award. Subsequently, she earned the Master of Science in environmental sciences in 1975, and her Ph.D. in microbiology in 1977, both at the University of Zagreb.

In 1980-81, supported by a fellowship from her government, Dunja came to Stanford for a year of postdoctoral research in the Environmental Engineering and Science program. The breadth and depth of her accomplishments in that year profoundly impressed the research community in which she worked. When a search to fill a faculty vacancy in the environmental microbiology area later was conducted, her achievements were remembered vividly, and she was hired as Assistant Professor, commencing her academic duties at Stanford in 1983.

Commitment to, and attainment of, excellence in teaching and research were the hallmarks of her tragically brief career at Stanford. Modest to a fault, she would never have made that claim for herself, but the statement rings all the more clearly from the bells tolled by her colleagues, peers, and students.

Dunja was a wonderful classroom teacher, her course offerings regularly recognized by students as among the most highly valued in the School of Engineering. Intellect, energy, dedication, and communications ability are among the requisites for outstanding teaching performance, and Dunja was amply endowed with those positive attributes. But above all, students appreciated her sensitive attitude and supportive demeanor. Dunja's research students especially cherished their close relationship to their advisor, her nurturing interest in their intellectual and personal development, and her readiness to share the power of her own imagination to instill creativity into their work. When all went well, she was quick to assign the success to the student; when difficulties arose, as invariably in research, she bore the responsibility upon herself.

Her research opened new directions in environmental microbiology, and raised new possibilities for the control of hazardous chemicals contaminating water and soil. Relying on incisive theoretical reasoning, innovative experimental design, and perseverant laboratory work, she was the first to show that certain classes of organic compounds, including aromatic hydrocarbons such as benzene' could degrade at an appreciable rate under anaerobic conditions. To overcome the skepticism of the scientific community, she definitively elucidated the degradation pathways in a series of elegant and precisely controlled experiments that entailed painstaking attention to the fundamentals of chemistry and microbiology. Her achievements were hailed as a seminal contribution by her peers in the environmental microbiology research community. Further, she collaborated with engineering colleagues to develop a wide range of biotransformation processes for application to the remediation of contaminated soil and water. She possessed a remarkable combination of intellectual rigor, flexibility, and pragmatism that enabled her to engage in productive multidisciplinary teamwork aimed at finding innovative solutions to real environmental problems.

Despite her intense dedication to her work, Dunja did not stint in her devotion to her family-husband, Hrvoie, and children, Domagoj and Mirna. Fulfilling her absolute commitments to her family and profession required dexterous balancing of priorities, as well as an extraordinary energy level.

Dunja maintained that intense level of activity in part by virtue of an indomitable will, and in part by maintaining herself in superb physical condition. Until struck by illness, she was quite athletic: she was especially fond of and proficient in aerobics, which she also instructed.

Dunja's zest for life, and her compassion for all living things, knew no bounds. To many of her friends and associates, she established a reputation for being the gentlest person we have ever known. Birds and flowers held a special place in her heart. She frequently nursed injured birds back to health, and regularly acted as guardian and caretaker of the ducks that annually raised their broods in the ornamental pond beneath her office window at Terman Engineering Center. The rose garden that she planted and tended outside her office was a delight to the senses, an oasis of color and aroma in the otherwise rather sterile surroundings of that building. Dunja abhorred violence in any form, and was terribly troubled by the cataclysm that befell her native country in recent years.

In an age of specialization, her life was further distinguished by creative accomplishments outside her field of professional endeavor. Dunja was a gifted musician and artist; knew four languages fluently as well as others functionally; and also published a volume of short stories in her native language, under the title *Oporuka* ("Testament"). Few among us are capable of so broad a spectrum of creativity.

In closing, it is fitting to recognize that Dunja's genius and humanity transcended national boundaries, those of her adopted as well as her native country. She personified the quest for universality, perhaps the University's highest goal. Her international scientific reputation, her far-ranging artistic and linguistic talents, her deep concern for all humankind and indeed all life - these attributes qualify her as a modern paragon of the Renaissance ideal. We will remember her for that eminently human wholeness, as much as for any particular professional part of it.

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